SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1934.—Vol. XLII.] LONDON, SATURDAY, SEPTEMBER 14, 1872 {PRICE.....FIVEPENCE. PER ANNUM, BY POST, £1 4s

GOVERNMENT INSPECTION OF COAL MINES.

THE INSPECTORS' REPORTS.

The reports of the several Inspectors for 1871, just issued, although showing an increased number of deaths to have resulted from accidents in connection with colliery operations, do not indicate any diminution in the skill and care displayed in the management of collieries generally. The number of separate accidents has remained about stationary; there were 826 in 1871, and 830 in the preceding year; but the deaths resulting therefrom were 1075 in 1871 against only 991 in the preceding year. Taking, then, the gross average, the comparison would necessarily be unfavorable. The quantity of coals raised was 117,500,000 tons in 1871 against 113,000,000 in 1870; and whilst in 1870 there was but one life lost in each 354 persons employed, there was in 1871 one life lost in each 345 persons employed. Yet there really appears to have been some improvement in most mines, for the unfavourable average has been brought up by less than half-a-dozen exceptionally fatal explosions. That accidents will from time to time occur in the working of collieries, as in every other class of industry, must be expected; and it must be gratifying to all concerned to find that it each year becomes more and more unusual to find more than one or two men killed by each separate accident; it is from the consideration of the figures in this sense that the most reliable conclusions as to the progress made in colliery management can be drawn. These remarks, of course, will not apply to accidents from explosions, for it must be acknowledged that whenever an explosion happens the risk of loss of life is only limited by the number of persons employed in the pit, or district of the pit; so that a calamity involving the loss of 100 lives, if it be an explosion in a colliery ordinarily well ventilated, may indicate no greater want of care than one which results in the loss of only a few lives. We subjoin our usual tabulated summary, which will permit of the several classes of accidents being compared:—

COAL MINES—1870.

Names of districts.	Separate accidents: Explosions of fire-damp.	Falls of roof and coal and sides of working.	In shaft.	Miscellaneous, underground and at surface.	Total.	Deaths resulting: Explosions of fire-damp.	Falls of roof and coal and sides of working.	In shafts.	Miscellaneous, underground and at surface.	Total.
Northumberland, Cumberland, North Durham district	3	36	7	38	84	5	36	7	39	87
South Durham	—	36	7	43	86	—	36	10	45	91
North and East Lancashire	10	29	10	16	66	27	30	11	18	86
West Lancashire and North Wales	6	47	20	14	104	25	50	20	35	130
Yorkshire district	9	43	13	18	83	11	46	14	19	90
Derby, Nottingham, Leicester, and Warwick	1	22	6	18	47	2	22	6	20	50
North Staffordshire, Cheshire, and Shropshire	6	28	12	14	60	33	28	12	14	87
South Staffordshire & Worcester	4	42	16	18	80	4	42	17	19	82
Monmouth, Gloucester, Somerset, and Devon	3	27	3	18	51	3	27	3	18	51
South Wales district	7	51	12	32	102	61	53	17	32	163
Eastern district of Scotland	5	28	5	7	45	12	28	5	7	52
Western district of Scotland	2	13	7	—	22	2	13	7	—	22
Total	56	402	118	254	830	185	411	129	266	991

COAL MINES—1871.

Northumberland, Cumberland, North Durham district	1	29	7	29	66	1	29	7	29	66
South Durham	2	30	5	43	80	27	30	6	48	111
North and East Lancashire	3	37	14	7	61	3	37	14	7	61
West Lancashire and North Wales	6	53	15	37	111	84	57	15	37	193
Yorkshire district	7	41	13	19	80	10	42	13	19	84
Derby, Nottingham, Leicester, and Warwick	5	31	5	15	56	42	31	5	15	93
North Staffordshire, Cheshire, and Shropshire	4	15	9	12	40	13	15	11	13	52
South Staffordshire & Worcester	6	39	9	19	73	6	40	10	28	84
Monmouth, Gloucester, Somerset, and Devon	5	34	14	17	70	23	35	14	17	89
South Wales district	6	59	9	22	96	47	61	9	22	139
Eastern district of Scotland	3	31	11	7	52	3	31	11	7	52
Western district of Scotland	4	27	7	3	41	10	27	8	6	51
Total	52	426	118	230	826	269	435	123	248	1075

IRONSTONE MINES—1870.

South Durham	—	—	—	—	—	—	—	—	—	—
Yorkshire district	—	1	—	—	1	—	1	—	—	1
Derby, Notts, Leic., & Warwick.	—	1	—	—	1	—	1	—	—	1
North Staff., Cheshire, & Shrop..	1	6	1	3	11	3	6	1	5	15
South Staffordshire & Worcester.	3	5	1	2	11	3	5	1	2	11
Monm., Glos., Somerset, & Devon	1	8	—	3	12	1	8	—	3	12
South Wales district	—	2	—	—	2	—	2	—	—	2
Eastern district of Scotland	—	6	—	1	7	—	6	—	1	7
Western district of Scotland	—	2	3	1	6	—	2	3	1	6
Total	5	31	5	10	51	7	31	5	12	55

IRONSTONE MINES—1871.

Yorkshire district	—	1	—	—	1	—	1	—	—	1
North Staff., Cheshire, & Shrop..	1	9	2	5	17	1	11	2	5	19
South Staffordshire & Worcester.	—	2	—	1	3	—	2	—	1	3
Monm., Glos., Somerset, & Devon	—	8	—	3	11	—	8	—	3	11
South Wales district	—	1	1	—	2	—	1	1	—	2
Eastern district of Scotland	—	1	—	2	3	—	1	—	2	3
Western district of Scotland	—	3	5	2	10	—	3	7	2	12
Total	1	25	8	13	47	1	27	10	13	51

In the Cumberland, Northumberland, and North Durham district, for example, no accident resulted in more than one death. In South Durham the explosion at Seaham No. 3 Pit caused 26 deaths, but the remaining 79 accidents caused 85 deaths only. In North and East Lancashire no accident resulted in more than one death. In the West Lancashire and North Wales district the Ince Moss explosion caused 70 deaths, and a second explosion, a few days afterwards, 5 deaths more, in addition to which the Hindley Green explosion caused 6 deaths; but the remaining 108 accidents resulted in 112 deaths only. In the Yorkshire district there were but 84 deaths to 80 separate accidents. In the Derbyshire district the Renishaw Park, Norwood, and Tapton explosions caused 26, 9, and 4 deaths respectively; but the remaining 53 accidents caused but 54 deaths. In the North Staffordshire district the Leycett Colliery explosion caused 8 deaths, the remaining 39 accidents causing 44 deaths.

In the South Staffordshire district 73 accidents resulted in 84 deaths, and the excess in this case is not caused by explosion, but by three curious miscellaneous accidents. At Highbridge Colliery, Pelsall, three were killed by a sudden irruption of sand and water; at Buffery Colliery, Dudley, two were suffocated by carbonic acid gas whilst repairing an old shaft; and at Black Lake Colliery, West Bromwich, eight were suffocated while asleep by gases produced by an underground fire. Thus three accidents caused 13 deaths, but the remaining 70 accidents caused but 71 deaths. In the Monmouth, Gloucester, Somerset, and Devon district the Victoria, Ebbw Vale, explosion caused 19 deaths, and the fall of coal in the Black Vein, Risca Colliery, killed John Wilkins, and John Phillips who went to his assistance, but with these exceptions no accident caused more than one death. In the South Wales district the Pentre Colliery explosion caused 38 deaths, and the explosion at Gadley's four deaths; and the remaining 94 accidents caused 97 deaths. In the East Scotland district no accident caused more than one death; and in the West Scotland district 41 accidents resulted in 51 deaths, the difference being caused by the four explosions, leading to 4 2, 2, and 2 deaths respectively, and by an accident in a sinking shaft causing three deaths. Thus, whilst the fact of 219 deaths resulting from 12 accidents shows that in certain pits there is much room for improvement, it cannot but be gratifying to find that although there are 3100 collieries in operation the work has been carried on in 3000 of them with no more than 814 fatal accidents, causing but 856 deaths, although employment has been given to upwards of 370,000 persons.

The number of male coal miners employed in and about the coal mines of Great Britain, the number of fatal accidents and lives lost in proportion to the quantity of coal raised, and the proportion of accidents and lives lost to the number of persons employed, will be seen from the subjoined table. The continued efforts of the miners to evade work, regardless of the risk to life thereby run, is prominently referred to by Mr. Higson. He states that until a very recent period it was customary for colliers to hole the coal and nick the side of the place, and then get down the coal with the hammer; but wedge-nicking is now all but totally abandoned, and unless the men are carefully watched holing under the coal will be given up also. The use of gunpowder will be made to supply the place of both, it requires so much less labour. Holing and nicking are useful operations—nay, necessary precautions—even before blasting, as the resistance of the coal is thereby lessened, and the production of flame reduced to a minimum.

Nearly every explosion causing great loss of life has been produced by the misuse of gunpowder, by firing shots in the neighbourhood of gas accumulated or passing along in the air in places where men were allowed to fire and charge their own shots, and often to do much as they liked; such careless regulations have in many places ceased to exist. Colliers, he observes, are of necessity left more to themselves than any other class of operatives, and the managers of mines too often depute to others duties which they should discharge themselves. We may hope that the new Act may render such complaints in the future altogether unnecessary. The following table shows, among other things, that the percentage of increase in the production of coal has somewhat decreased:—

1870.

Names of districts.	As computed by each Inspector for his own district: Males employed.	Tons coal raised.	Per separate fatal accident.	No. employed per life lost.	Tons of coal raised per separate fatal accident.	Tons of coal raised per life lost.	Number of collieries.
Northumberland, Cumberland, & N. Durham	34,000	12,500,000	405	390	148,811	143,680	188
South Durham	41,100	16,800,000	478	452	195,349	184,615	162
North & East Lancashire	26,200	7,030,000	397	354	106,575	81,744	898
West Lancashire and North Wales	32,300	9,000,000	311	248	86,538	69,230	189
Yorkshire	36,500	11,545,400	440	406	139,101	128,282	417
Derby, Notts, Leicester, and Warwick	28,810	8,366,000	613	576	178,000	167,320	197
North Staff., Cheshire, and Shropshire	21,000	6,500,000	350	241	108,333	74,713	225
Sth. Stafford & Worcester.	29,000	10,400,000	362	353	130,000	126,829	550
Monmouth, Gloucester, Somerset, and Devon.	26,000	6,500,000	509	509	127,451	127,451	195
South Wales	29,000	9,229,772	284	178	91,174	57,054	300
Totals—England & Wales.	303,910	97,941,172					2721
East Scotland	27,330	8,595,238	607	525	191,005	165,293	220
West Scotland	19,654	6,339,315	893	893	288,150	218,150	201
Totals, Scotland	46,984	14,934,553					421
Totals & averages—England, Wales, Scotland.	350,894	112,875,725	422	354	135,994	113,900	3142

1871.

Northumberland, Cumberland, & N. Durham	36,000	12,530,000	545	345	189,848	189,848	190
South Durham	43,000	17,946,000	538	388	224,325	161,676	161
North & East Lancashire	26,100	7,575,800	428	428	124,193	124,193	286
West Lancashire and North Wales	32,218	8,775,000	290	166	79,054	45,466	186
Yorkshire	38,600	12,801,260	482	459	160,016	152,396	422
Derby, Notts, Leicester, and Warwick	31,051	9,252,900	554	334	185,234	99,494	200
North Staff., Cheshire, and Shropshire	21,200	6,500,000	530	408	162,500	125,000	228
Sth. Stafford & Worcester.	31,000	10,500,000	424	369	143,835	125,000	545
Monmouth, Gloucester, Somerset, and Devon.	26,881	7,000,000	371	292	100,000	78,652	186
South Wales	37,960	9,120,000	395	273	95,000	65,611	280
Totals—England & Wales.	324,020	102,000,960					2684
East Scotland	27,300	8,883,926	525	525	170,844	170,844	220
West Scotland	19,561	6,554,365	477	383	159,862	128,516	196
Totals, Scotland	46,861	15,438,291					416
Totals & averages—England and Wales	370,881	117,439,251	448	345	142,178	109,246	3100

The above tables really embrace all the general statistics contained in the reports, and a large amount of information as to the precise circumstances under which the several accidents happened is given in the reports for each district. As usual, the reports supply many valuable suggestions and observations of a practical character, which will be fully referred to in subsequent Journals.

Original Correspondence.

SOUTH STAFFORDSHIRE COAL FIELD.

IS THERE ANY COAL OUTSIDE THE PRESENT PROVED BOUNDARY? SANDWELL SINKING.

At the present time there is much excitement and rife speculation in this coal field as to the probabilities of the extension of the coal measures outside the present limits, and lying underneath the Permian and New Red Sandstone formations. This is more so on account of the progress being made with the new sinking in Sandwell Park, and the hitting of a thin seam of coal at about 200 yards from the surface. Also because this sinking is to prove, we hope, hidden treasures at least three-quarters of a mile outside the proved boundary in a south-easterly direction. At an epoch when the term "Black Diamonds" is beginning to be accepted as a very expressive title, and no misnomer, and when the mother coal field refuses to yield a supply equal to the demand, it will be no waste of ink and paper to consider, as practically as possible, details bearing upon this important question.

Let us first consider what the Royal Coal Commission has to say on this question. Referring to the quantities of coal worked and unworked, it computes that in South Staffordshire, Coalbrookdale, and Forest of Wye coal fields there are available 1,906,119,768 tons of coal, while outside the present coal fields and under Permian and New Red Sandstone, at supposed workable depths, it gives—District between Warwickshire and S. Staffordshire coal field, 3,400,000,000 tons. District between South Staffordshire and Shropshire coal fields, 5,800,000,000 tons. District between South Staffordshire and Coalbrookdale and North Staffordshire coal fields, 4,580,000,000 tons.

Professor Ramsay, in his report, gives elaborate and interesting details in support of his opinions of the existence or continuation of coal measures under the Permian and overlying formations within certain prescribed limits. His report is so connected and thorough, that we cannot fairly give any abstract, but refer anyone interested to peruse the Blue Books. His general opinion is that the South Staffordshire coals will extend in a direction from Oldbury towards the Warwickshire coal field within a certain limit on south and east. The Sandwell Park Estate would come within the prescribed limit. Although we ask the question, "Is there coal outside the present proved boundary?" it is already proved, beyond doubt, that the Thick coal exists under the Permian on the south-east side, within the ¾ of mile of sinking on the Sandwell Estate. We have several deep coal pits; the most remarkable of which are those sunk by Messrs. Davies, at Bullock's Farm, near Spon Lane. In these pits they passed through a mass of sandstone and marls belonging to this formation 262 yards 2 feet, or 728 feet thick, or deducting the odd 28 feet for surface drift, &c., 700 feet of Permian, a good part of which, if not the whole, must be below the 660 feet passed through at the "ruck of stones." What makes the section of these pits most remarkable, however, is that there occurred in them a small seam of true Permian coal. The following is an abstract of the upper part of the section:—

1.	Sand	Feet	28 0
2.	Alternations of red sandstones with red and mottled marls and clay		169 0
3.	Fire-clay		3 0
4.	White binds		12 0
5.	Little coal		0 10
6.	Fire-clay		3 8
7.	Red clay and sandstone		28 0
8.	Dark and pale red sandstones		213 0
9.	Alternations of red and white sandstones, with red and mottled marls and clays		270 0
			727 6

Jukes* has said, "I saw masses of the fire-clays, Nos. 3 and 6, on the pit bank while these pits were being sunk, and they did not differ either in colour or in any mineral character from the fire-clays of the coal measures, except in having small calcareous nodules interspersed through them. These nodules were carefully searched for fossils, but none were discerned. This sinking is the nearest to the Sandwell speculation, about which Mr. Henry Johnson says, in a valuable paper read before the Dudley and Midland Geological and Scientific Society, in 1863—"It is here worthy of remark that at Messrs. Chance's glassworks (adjoining Bullock's Farm) the Thick coal lies at a depth of 400 yards, is of its regular character and thickness, and no appearance of any fault in the direction of Smethwick and Birmingham, and having a slight south-easterly dip. This being the case, may we not fairly calculate upon the seam continuing not only in a direction for Birmingham, but in a direction taking in the ground between Oldbury and Smethwick on to Warley Abbey?" Again, in the same paper he says—"I will mention the desirability of endeavouring to establish a connection between the Thick coal, where last seen at Spon Lane, West Bromwich, at a depth of 400 yards, and the outcrop of a coal of a similar thickness (10 yards) at the Hawkesbury Colliery, near Coventry." Mr. Johnson is now in the proud position of being the promoter of a scheme which, if properly carried out, will for ever settle the question. We refer to the Sandwell sinking. Having sunk through about 600 ft. of Permian strata, similar to what was passed through at Bullock's Farm, a Thin seam of coal is met with.

This discovery has given rise to much speculation as to whether this Thin seam is identical with the "true Permian coal" found at a depth of 70 yards at Bullock's Farm, or with some of the seams of Thin coals found in the measures above the Brooch coal. Several local correspondents have with solemn judgment informed the public that the good feeling expressed by the promoters and those interested in the scheme are quite premature. Why? Because, say they, in the abundance of their wisdom, this coal is not an indication of the Thick coal, but is most probably the same coal as was met with at Bullock's Farm. These correspondents could not have read Mr. Henry Johnson's report at a meeting of the Mining Engineers on the 3d inst., and reported in the *Mining Journal* of the 6th. He says—"I am sure you are all aware of the caution with which I have always approached the subject of the actual existence of the Thick coal. Even now, with the flattering indications which exist, and which you will see and examine for yourselves to-day, I am still not going to say the Thick coal is underneath; nor shall I do so until

* This is from a memoir of the South Stafford Coal Field.

I actually see it. But what I say is this, that the discovery made last Thursday is of a very hopeful character."

The transition from the Permian red beds to those of what appear to be coal measures has been very gradual. The bright red becoming pale port wine colour, and then gradually merging into the dark and thin pale-blue shales of the coal measures. Numerous fossil plants were found at 110 yards from the surface in the red beds. It remains yet to be seen whether the Thin bed of coal at 200 yards deep, or, as some people would call it, "black ring," corresponds with either of those found on the Bullock's Farm Colliery. Some *savans* go so far as to assert that it really is so, and that, therefore, the promoters of the Sandwell scheme must not expect to find the Thick coal under 400 or 500 yards.

There are three methods by which geologists are able to identify particular seams in different localities:—Relative Positions: Mineral Characters: Organic Remains. Applying this test to the coal in question, we find that the relative position in the Sandwell Estate and Bullock's is not exactly the same. In the latter it is found at a depth of 70 yards in Perman rock. In the former it lies at 200 yards deep, apparently a few yards below the Permian and in coal measure shales. The mineral character of the coal would be similar. The organic character, which is often the truest test of identification in seams widely apart, is in the present case very dissimilar. At Bullock's Farm the coal and shales above and below were examined, as before stated, by Professor Jukes, and no fossils were discovered. The shales above and below the Thin coal at Sandwell, teems with beautiful fossil ferns, calamites, &c. In fact, the laminated shales may be split open like the leaves of a book, and between each is a distinct impression of fossils. It is worthy of note that the shales in which the Thin coals lie, above the Brooch coal, also contain abundant fossil remains, of the same specie as found at Sandwell. However, a few weeks sinking will set the matter at rest, but this should not deter us from closely observing every inch of strata passed through. Considering that there is so vast a quantity of fuel likely to be found outside present coal fields of South Staffordshire, Shropshire, and Warwickshire, any proof outside the old boundaries should be encouraged in every possible way, and every feature noticed, so that in future proofs comparisons may be made.

Another dark cloud which a few are fond of holding over the spirited undertaking is that a Silurian bank, or cliff, cuts off the coal in that particular neighbourhood. It is quite true that our coal measures were deposited on the uneven surface of the Silurian limestones and shales, and that here and there jut out cliffs and banks, against which the coal measures lie. At the Heath pits, West Bromwich, the Thick coal and shales are cut out by one of these ridges of Silurian. It is impossible for any man, scientific or otherwise, to say with certainty in what direction these banks lie, or the height to which they may be traced. Still, by carefully studying the physical geology of the district, some idea can be given as to the lines of disturbance, &c. Prof. Ramsay, who is too able a geologist to overlook a fact of this kind, refers to it in his report to the Royal Coal Commission; and he in that report gives it as his opinion that this Silurian ridge, which cut off the coal at West Bromwich, takes an easterly direction, leaving large areas between Staffordshire and Worcestershire with coal measures intact. We sincerely hope Sandwell sinking is within these limits, as he supposes it to be.

In conclusion, supposing the coal found to be really the thin Permian coal passed through at Bullock's Farm, what then? It proves that although the measures are much in the deep they are regular, and the probability of coal being found as great as though it were the same depth as Spon Lane pits. The extra depth of 200 or 300 yards is not a matter of so much moment as some suppose. For thinner seams and less valuable coals sinkings have been prosecuted to a greater depth. For instance, at Monkwearmouth Colliery, Sunderland, after sinking through new red sandstone, magnesian limestone, and Permians, a seam of coal 4 ft. thick was found at a depth of nearly 600 yards. At Dukinfield new red and Permians were sunk through, and the lowest coal, 4 ft. 8 in. thick, found at a depth of 700 yards, and many others could be mentioned. Let the promoters not be discouraged by the remarks of those who are fond of the "dog and manger" principle. They are engaged in a noble undertaking, for which they deserve the help and encouragement of every Englishman, seeing that they are in search of that which makes a nation great and powerful.—*Willenhall, Sept.* 10. T. PARTON, F.G.S.

COAL IN IRELAND—No. II.

EAST MUNSTER OR TIPPERARY COAL FIELD.

SIR,—A short description of the Tipperary coal field may next be given. It is a south-west spur from the Leinster coal field, and, properly, ought to be classed with it, as nearly half the area now to be described is situated in the county Kilkenny, the field being separated from that of Castlecomer by the valley of the Nore.

The south-west portion of this field is commonly known as the Sleivardagh Collieries, and in it coal has been worked for a considerable time, but principally near the outcrop of the seams and in the shallow basins. A large area of coal ground is known to exist, occupying a tract about 6 miles long, and more than 2 miles wide, on the north-west of the village of Killenaule. In this tract my colleague, Mr. J. O'Kelly, has proved eight or nine coals, six of which (Nos. 2, 4, 5, 6, 7, 8, in the memoir) are of more or less value, and have been worked. The four uppermost coals (Nos. 5, 6, 7, and 8) seem only to occur in one basin, while one coal (No. 4) has been found in four small basins; these five coals are now more or less worked out. No. 2 coal is still unwrought under a considerable portion of the area, and to "take" it all out would necessitate that some of the pits should be on an average 230 yards deep. Full details will be found in Mr. Kelly's report.

South of the tract just mentioned, and between two and three miles due east of Killenaule, is a basin of No. 2 coal, while in the neighbourhood of Ballinofarry that coal ought probably to be found. Further north-east, in the county Kilkenny, coals have been proved and partially worked, while still further north-east there is a large untried tract of coal measures, in which it is probable other coal basins exist. As the coals in this field lie in deep basins or troughs, it is a question whether if all the deep portions were taken out the coal would pay for the "getting."

Let us now consider suggestions as to the working the coals in Leinster and Munster. The collieries ought to be worked either by private individuals or by *bona fide* companies, and I would especially warn parties about investing their money against big promises, for they are, as a rule, the forerunner of failure. It is very easy to puff up an undertaking, but it is quite a different matter to plan out a paying and successful enterprise. Prior to any work being commenced, the best possible advice ought to be procured as to where the coal is likely to occur, and all new ground should be proved by bore-holes prior to pits being sunk. Two or more bore-holes are, in general, better than one, as from the evidence thereby collected the most advantageous sites for the pits could be chosen. Of course, circumstances may modify this suggestion, and in some places only one bore-hole would be necessary. The sites for the bore-holes should be in unbroken ground, as the measures in the neighbourhood of faults are nearly always more or less confused; consequently the data obtained would be liable to mislead. All pits should be sunk as near as possible to the centre or trough of the basins, as thereby the maximum quantity of coal could be raised out of the smallest number of pits. The great expense of "coal getting" is sinking the pits; therefore, the fewer they are the better. In many collieries it will be found that, although a pit may have paid well, yet, on account of the limited area of coal it commanded, the money gained was lost in sinking another pit to continue the colliery. From this it is apparent that a large outlay at the first in putting down a deep pit that will command the whole of a colliery or basin is in the end much more profitable than sinking a number of shallow pits that give quick returns.

In the Kilkenny and the Queen's counties I see no new evidence as yet put forward to prove that there are additional coals to those already known, although it may possibly exist. It will, however, probably remain an open question until a deep bore-hole is put down, the exact position for which might be decided at a general meeting of the proprietors and others interested. In this field, as previously shown, there are other places in which there may be workable coals; and, as these places are more or less new ground, they ought to be tested by judiciously-placed bore-holes prior to any other works being commenced.

In the field called in these letters the "East Munster Coal Field," great judgment should be used in selecting the sites for the bore-holes, as in many places the strata dip at a high angle; and, if such a place were selected, the boring for the most part would only penetrate one or two beds, instead of a series of beds. The site for a bore should, therefore, always be where the strata are horizontal, or dip at a low angle. In the south part of the county Cork the strata occur in sharp, nearly perpendicular folds, so that bore-holes in general are absolutely useless—that is, perpendicular to the places of the beds or strata. In most planes, however, an open cast or a drive would more easily prove the nature of the ground. Limerick, Clare, and Kerry may be called untried fields, for, with the exception of the coals at Loghill and one or two other places in the first-mentioned county, the position of the coals is unknown. Here, as previously pointed out, the coals lie in troughs, and could be proved by judiciously-placed bore-holes, or, in some situations, by open cast and drives.

It may be asked, Who is to supply the funds to make the trials? In many places the individual proprietors ought to do this, as the collieries on their estates should well repay any of these preliminary outlays; but in other places a number of small properties lie together, and if one of the owners proves a coal all are benefited at his cost. This ought not to be the case. I would, therefore, suggest that in such localities the different proprietors should club together and form exploring funds; or perhaps the money might be found by a Government loan, to be refunded by all the parties benefited; or a company might be formed to work a certain area of country, and it would be to their interest to prove what coals existed in their "take." G. HENRY KINAHAN.

SILVER MINES IN INDIA.

SIR,—A letter in the *Times*, of Sept. 4, mentions the "Silver country of the Vazeers," or, as the India Survey maps have it, "Vazeeri Rupi." It consists of 677 square miles in "Kulu," which was visited by the late Lord Mayo last November, and he expressed a wish for a large piece of serpentine, of which there is a quarry here, to make an urn or vase 4 ft. high by 2 ft., and proposed having it carved at Agra. These silver mines, of which the true number is not yet known, have been hid and planted over for hundreds of years by the natives, to prevent the compulsory labour ordained by the native rajahs. Fearless of such exactions under British rule now, no opposition has been made to their re-discovery and opening, and with the consent of the Punjab Government the rajah has disposed of all his rights for minerals in Vazeeri Rupi to a European of experience and enterprise, who is now in England with a view to meet with capitalists to open the numerous and valuable lodes.

Dr. Oldham, the Superintendent of the Geological Survey of India, has had several specimens assayed. No. 2 gave 89 ozs. 16 dwts. 16 grs. of silver to the ton; but, he remarks, not one-half of the silver is in the galena, but in the ore generally, which contained also 3·8 per cent. of copper, and the silver contained gold. Other assays have been made in London, giving 120 ozs., and native assays make some specimens as high as 1-16th silver. Considering that lead sells in the Punjab at 28*l.* to 33*l.* per ton, and produces nearly, if not quite, as much in silver, the profit offered is at least 40*l.* per ton, and the sales made on the spot.

Besides these—at least 20 mines—there are as many of copper, which sells there for 120*l.*, affording an ample profit, the lowest price at Delhi being 112*l.* There is also a lode of antimony, 15 ft. wide; solid metallic ore of greatest purity cropping out on the surface of a high hill by the road. Added to these mines of wealth are salt—a mine of which, in Mundi, yields the rajah 300,000 rs. per annum, or 30,000*l.* a-year profit. Sulphur, manganese, bismuth, and iron are in plenty, and there are hundreds of miles covered with forests of immense pine trees 100 feet high for fuel. Labour is plentiful at 4½d. per day; and the roads and bridges are the great highway to the North. Gold is washed in the river, and diamonds have been found on the road. The climate is most lovely, and Kulu is annually visited by hundreds of officers on leave. Such a property needs only to be known to be immediately taken in hand. R. W.

PUDDLING IRON WITH PEAT FUEL.

SIR,—I find in the *Mining Journal* that the use of peat as fuel is attracting much attention. My furnace is adapted to puddle iron by the use of such fuel, and I am prepared to risk my reputation and patent upon the trial of it. I will briefly describe the mode of operation, so that you may form your opinion upon it. I melt the iron on a hearth in contact with the fuel. I then run it into a receptacle specially constructed to fine it, when it is again run into a third chamber to be puddled. Now, if the peat has sufficient strength to raise the temperature to the melting point of the pig-iron it is well adapted to puddle it. I wish to observe that the superfluous heat given out by the fuel in fusing one charge is utilised in puddling another, and is more than adequate (by the use of coal) for the purpose. The puddling chamber, if the weight of the charge be 10 cwt., is only 4 ft. from the melting point; moreover, the graphite contained in the pig-iron gives out an intense heat in the fining, so that there is no doubt about carrying on the melting and puddling simultaneously. I melt down by the use of blast, but I am aware that the chemical affinities between the fuel and blast may be strong, so that the combustion would go on rapidly through the peat being soft and porous. This difficulty would be overcome by regulating the pressure of the air.

With regard to yield and quality, it would be equal to that produced by the use of mineral fuel, if not superior, because the iron after being melted is fined by air, and other oxidising agents if necessary, before it is refined by puddling. I could erect a furnace capable of working a charge of 4 or 5 cwt. for about 70*l.*, but it would require to be where there is blowing apparatus, and I could have it in operation in a month from the time it might be decided to test it. I repeat, if the peat contains sufficient combustible strength to melt the iron it is adapted to puddle it. The patent only requires development, but my great difficulty, I presume, in getting it tried would be in my needing assistance while it is being tested. I am, however, prepared to sell one-half of the patent right on very liberal terms as an equivalent. INVENTOR.

Sept. 5.

ROCK DRILLS.

SIR,—In the Supplement to last week's Journal your correspondent, "Mine Agent," makes a suggestion with regard to Rock-Boring Machines, which I cannot think would lead to any useful result. Your correspondent names three boring machines now prominently before the mining public, and each of which is deserving of the most earnest study and consideration by everyone connected with, or interested in, mining and tunnelling. These machines are known as the Diamond Drill, the Burleigh Drill, and the McKean Drill. The former is now, or was a few weeks since, hard at work driving a tunnel under Durdham Down, Clifton, and I was told was working most satisfactorily, and enabled the contractor to carry forward the work at *four times* the speed that he would be able to do by using hand-labour only. The average speed at which the holes for blasting were being drilled by the machine was, I understood, 2 in. per minute, or (say) 50 in. in 25 minutes.

The Burleigh Rock Drill and the McKean Rock Drill are upon a totally different principle, and instead of cutting out a hole by means of diamonds revolving around a disc, or core, they operate by means of percussion, and drive a hole precisely the same as by hand-boring, only at much greater speed. Experimentally, both of these rock-drills can with ease bore a hole in granite at the rate of six and more inches per minute; but, as in practical mining half that rate of boring will prove an incalculable boon both to working miners and their families, and to mine owners and agents, the point upon which we require positive evidence is whether either or both of these rock-drills will stand the actual wear and tear of mine usage in sinking shafts and driving levels for any considerable period without requiring excessive repairs. And this evidence, I submit to your readers, must be secured by actual underground operations, and not by a surface competition in the manner suggested by your correspondent.

Possibly some of your readers may already have had experience of the underground use of one of these rock-borers, and may be willing to publish their opinion of the machine. The account given in last week's Supplement of the working of the Sach Boring Machine by Mr. Darlington is very interesting. J. C. B.

London, Sept. 11.

TRIAL OF ROCK-BORING MACHINES.

SIR,—Our attention has been called to the letter of "Mine Agent" in the Supplement to last week's Journal, proposing a competitive trial of Rock-Boring Machines. We have no objection to engage in any trials that may be desirable to the proprietors of other machines, or to submit our machine to such tests as mine proprietors or engineers may wish. One of our machines is working here every day on granite or other hard rocks, such as whinstone, emerystone, &c., where parties interested may suitably judge of its merits. We have lately adapted a counter to the machine, operated by the steam while it is driving the piston in its reciprocating movement, and can at once determine the exact number of strokes made within a given time. This counter cannot work at all without counting correctly, and it frequently indicates 1000 strokes per minute, a speed which we consider practicable without liability to derangement of the machine. That it will bore a 2-inch hole 6 inches per minute in Aberdeen granite, with a common flat-pointed steel drill that has already bored 4 feet in the same stone, is in itself proof of rapidity of stroke and power, and speaks well for its mechanical construction. It may be noted, also, that this capacity of the machine to bore so much without re-sharpening of tools is an important item in the saving of steel, and saving of time. As those mining companies which appear to have some concern for the interests of their shareholders are now giving attention to the matter of mechanical boring, it is of interest to them to be able to determine the merits of the different machines; and, so far as we are concerned, aside from the facilities which we daily offer, as above noted, we would willingly accept to enter upon any other desirable or acceptable conditions of trial.

Borough-road, London, Sept. 10. MCKEAN AND CO.

SCIENCE OF INVESTMENTS.

FOREIGN LOANS, JOINT-STOCK BANKS, AND BRITISH MINES.

It is desirable to determine if practicable the amount of money lent by Great Britain to foreign nations and states, and as well to ascertain an approximate value of the aggregate loans at the present time in comparison with the prices of issue and the average interest received for the use of our money. That John Bull's greed is equal to his credulity is well known, and for the good of the investing capitalists too generally recognised and utilised by the needy and borrowing foreigner, yet I was wholly unprepared for the startling announcement on the 5th inst. by a City newspaper that the indebtedness of the world reached the following vast and mighty sum. The *Stock Exchange Express* says:—

"It is one of the maxims of law that a State cannot be sued; consequently, any government can commit the gravest wrong, and the aggrived cannot obtain redress if the wrong-doer pleads its sovereign rights. When we consider that foreign loans amount to two million five hundred thousand millions . . . and that it is in the power of any State to annihilate any security pledged to the lender . . . it is time in this advanced state of civilisation to ventilate this monstrous iniquity."

There can be no question in respect to the indebtedness of communities, both civilised and semi-barbarous, being great, momentous, and expansive, while the interest paid for the use of money is tempting and remunerative. Still, the all-important question to consider is, What is the security for interest and return of capital? I cannot myself understand where the nations and peoples exist who can borrow, far less lend, this monstrous sum—two thousand five hundred billions sterling, a sum just equal to 3125 years' income of the United Kingdom at eight hundred millions a year, (say) from the beginning of the Christian era to the year 3125, A.C.; and, again, a sum equal to the gross weekly returns of 124,328,000*l.* of the London bankers' clearing-house for upwards of 386 years to come.

This paper further asks its readers—

"Why in the name of common sense, and indeed of common justice, cannot a State be placed in respect to its own laws in the same position as a private individual?"

It appears to me that, so far as England is concerned, the active loans to foreign countries slightly exceed that borrowed by the mother country—say, 1,000,000,000*l.*, against 800,000,000*l.* at home. The foreign loans at market prices, exclusive of drawings at par, pay the investor as follows:—Argentine, 6 5-16ths per cent.; Brazil, 5⅓; Buenos Ayres, 6⅛; Chili, 5⅞ and 5 3-16ths; Costa Rica, 8⅜; Danubian, 7⅝ and 8 13-16ths; Egypt, 7 11-16ths, 6 15-16ths, 8 11-16ths, 7⅛; and 8⅜ths; French, 6; Honduras, 23½; Italian, 7⅜, 7 5-16ths, and 6¼; Japan, 8 3-16ths; Mexican, *nil:* New Granada, *nil:* Ditto, deferred, *nil:* Ditto, Three per Cents., 8⅛; Paraguay, 10; Peru, 7⅛; Portuguese, 7½, 10; Russian, 5, 5-16ths; San Domingo, 10; Spanish Three per Cents. 6 1-16th, and 8; Turkish, 9½, 8 11-16ths, and 9⅜; Uruguay, 8⅛ per cent. The above loans amount to no less than 500,000,000*l.* nominal capital, and are marketable at about 300,000,000*l.* sterling, or two-fifths discount.

In Joint-Stock Banking shares stagnation usually prevails, as speculation exercises no effect, good or bad, on the prices of the day. This has been the mood of the Stock Exchange ever since the passing of the Act of Parliament prohibiting speculative operations ("time bargains") in this description of property. Investors will do well, therefore, to remember that in case of panic or disaster any large number of shares thrown upon the market will very unusually depress quotations, if not render sales absolutely impracticable. What security is there for joint-stock banks more than any other class of trading concerns? The collapse of the Royal Bank of Liverpool, Overend, Gurney, and Co., Barned, and numerous other establishments, attest the fact that joint-stock banks possess elements that render them peculiarly sensitive and susceptible to checks, reverses, and disasters, while the annual division of profits place future success or failure of the succeeding year's business wholly on fresh transactions, whether for profit or loss. There is nothing but capital and reserve funds to fall back upon, otherwise than the deposits and customers' balances. I do not venture to predict early distress in the banking interests of the country, but certain indications are too momentous to be overlooked, and should be well studied by every shareholder in the unlimited joint-stock banks. "Banks" differ from "Mines" in this respect also—the former divide all their accumulated gains annually, while the latter hold their reserves of ore intact, which ensures certain prospective dividends, while mines have pioneer points in operation to achieve further deposits of "ores," as a sett-off against the continuance of a lucrative business transacted by joint-stock banking—and that many mines are equal to the best banks we have only to refer to Dolcoath, Tincroft, and Carn Brea.

The Bank of England and the Bank of France have neither of them any surplus money, and what the effect of the latter's indebtedness to Germany may be we are entirely in the dark at present. In Germany speculation is rampant, and a reaction will assuredly occur. In the City an uneasy feeling exists in respect to several commercial houses, as well as in regard to the trades in cottons and woollens. One joint-stock bank is said to be a loser of 70,000*l.* by the failure of Messrs. Gledstanes alone, and other calamities are expected. I, therefore, feel anxious as to the effect which a succession of commercial disasters will have upon London joint-stock banking. In case of another squeeze, such as the panic of 1866-7, it is scarcely probable that Mr. Lowe will follow the example of Mr. Disraeli, and suspend again the Bank Act; it is equally if not far more probable that 1*l.* notes will be issued, or that the Bank of England will announce their readiness to receive deposits at interest alike with the London and Westminster and other joint-stock banks, and thus cause a transfer to its coffers of some 15,000,000*l.* to 25,000,000*l.* sterling, which now are placed with other banking institutions, because the Bank of England allow no interest either for deposits or customers' balances. The security of the "Old Lady of Threadneedle-street" would be preferred, upon equal terms, to any or all of the joint-stock banks in existence.

I now append the statistics of several mines that have come upon the tapis during my association with the mining interest, and I

must point out advantages in British mines which neither foreign loans nor joint-stock banks possess. Foreign loans very rarely go beyond par, hence there is no great margin for gains from enhanced market worth; the interest paid half-yearly constitutes the chief advantage to the public. The bonds are peculiarly fit for speculative "time bargains" on the Stock Exchange; hence they are especial favourites with the members; but the advantages accruing to them are so many losses to the outside dealer. Banks are trading concerns, and none of them have been in existence so long as Dolcoath, Tincroft, Cook's Kitchen, Carn Brea, North Roskear, Botallack, Levant, and many other mines in Cornwall; nor can one single instance of brilliant success in that description of property be pointed out equalling Devon Great Consols, South Caradon, Friendship, Levant, Tresavean, East Rose, or St. Ives Consols; while more joint-stock banks have suspended during the past 25 years than there have dividend mines that were quoted in the *Mining Journal* a quarter of a century ago. Again, from the discoveries of metallic wealth made, and the remunerative value of metals, there is every prospect of a brilliant future for those who engage in *bonâ fide* mining enterprise instead of gambling, speculative dealings on the Stock Exchange:—

Mines.	Called up.	Dividends.	Market value.
Alfred Consols	£16,197	£ 103,118	—
Bedford United	9,333	52,000	—
Trelawny	6,084	50,000	—
Great Laxey	60,000	225,750	£240,000
Minera	45,000	543,570	300,000
Cwmystwith	7,680	32,500	—
Herodsfoot	8,604	62,976	25,000
Lisburne	7,300	137,400	—
Rhosesmor	800	30,000	—
Mary Ann	10,240	75,264	10,240
West Chiverton	30,000	152,625	24,000
Van	63,750	109,500	550,000
East Rose	6,400	315,000	—
Margaret	12,432	74,563	15,000
Owles	5,600	41,480	25,000
Trumpet Consols	23,000	54,300	75,000
East Lovell	6,576	17,966	26,000
Great Work	11,900	35,000	—
East Caradon	16,794	92,160	30,000
South Caradon	640	352,512	110,000
West Caradon	5,120	102,500	—
Devon Great Consols	1,024	1,192,960	60,000
Friendship	6,400	307,500	—
Seton	22,586	50,000	—
West Seton	17,000	200,000	32,000
Wicklow	54,000	1,143,460	170,000
East Darren	9,600	60,330	—
Foxdale	70,000	200,000	—
Tankerville	72,000	30,000	200,000
Tincroft	54,000	233,550	380,000
Dolcoath	46,146	417,070	300,000
Carn Brea	35,000	293,000	175,000
Cook's Kitchen	48,375	300,000 + 25,113	72,500
Basset	2,640	326,665	40,000
Buller	1,280	240,000	—
North Roskear	1,400	110,000	—
East Pool	3,200	82,560	117,500
South Frances	9,393	185,840	—
North Basset	Nil.	150,000	—
West Basset	9,000	150,000	60,000
East Crofty	11,800	98,700	—
Great South Tolgus	4,350	50,000	—
South Tolgus	4,096	55,000	—
Trethellan	4,500	434,500	—
Tresavean / Treviskey / Brewer	20,000	150,000	—
United Mines and Consols	150,000	2,000,000	—
North Pool	4,500	64,500	—
Fowey Consols	19,760	205,000	—
Par Consols	7,200	256,800	—
Phœnix	25,000	238,750	Private.
St. Ives Consols	7,520	460,000	15,000
Providence	11,569	116,480	25,000
Levant	400	174,640	—
Botallack	18,250	127,950	50,000

R. TREDINNICK,
Consulting Mining Engineer.

3, *Crown-court, Threadneedle-street, Sept.* 12.

FAVOURITE INVESTMENTS.

SIR,—It is a matter of certainty that during the next six months a very large amount of capital will be invested by the public in all descriptions of securities. It may, therefore, not be *mal apropos*, but, on the contrary, interesting and instructive to your readers if we concisely analyse the position and prospects of the leading investments of the day—Foreign stocks, railways, banks, telegraphs, American Government securities and railway bonds, iron and coal companies, tramways, and last, but not least, British and foreign mines.

Foreign Stocks have not been greatly in favour with investors of late. Great discrimination is required in investing in this department of Stock Exchange business. In buying, the period and terms of repayment must be taken into calculation. Spanish has been especially strong upon advices as to the majority which the Ministry has obtained at the elections, and will command at the next Cortes. South American securities, again, have been strengthened by reports of the termination of the difficulties between Brazil and the Argentine Republic. The chief buying is for investment in Egyptian and Turkish securities, which, with Russian stock, appears to be advancing. Of the financial condition of Honduras or the railroad it is impossible to obtain any reliable or official information, as all such intelligence is carefully suppressed by those in authority. There are not more than between 50 and 60 miles of railway completed, of the easiest possible character, following the base of the hills on a level plain. Yet we are informed the cost of keeping even this portion in repair will be very considerable. The remainder of the proposed railway, about 180 miles in extent, is, with the exception of the plain of Comayague, across a mountainous country, with a vast amount of bridging over of gorges hundreds of feet deep. The country has never been carefully surveyed. An exploring party, it is true, has gone over the proposed route, and taken observations sufficient to give a general idea of the country, but no working survey has been made. It is estimated that another 6,000,000*l.* sterling would suffice to finish the line, if moderate interest only be paid out of the money raised. Argentine, Brazilian, Buenos Ayres, Egyptian, Russian, and French stocks yield a satisfactory return, and are good to buy at present prices.

Railways have been for some time past the favourite investment with the public, and owing to some disappointment as to the dividends—the result of two-thirds of the additional revenue instead of one-third, as calculated, being absorbed in extra working expenses, and to the subsequent efforts of directors to regain the former proportions—railway affairs have attracted more than usual attention during the past few weeks. With the month of September we have entered upon the experience of advanced rates, and the result is anxiously watched. The traffics of this month will decide the Christmas dividends. Meanwhile the Stock Exchange is the prey of conflicting opinions. The supply of stock is scarce, which encourages speculative purchases, and prices are, as a rule, too high, and the ordinary investor holds aloof. The greatness of the recent rise has, no doubt, reduced realisations; and it is also probable that speculators are generally disinclined to push their operations far in face of an indifferent harvest, and the chance of a check to the present prosperous traffics soon making itself apparent. It seems now evident that during the next few weeks there will be a strong contest between the operators for the fall and for the rise, the former reckoning on the bad harvest and other unfavourable circumstance, and the latter holding that these circumstances are exaggerated, and that a remarkable improvement in railway dividends is to be looked forward to, in spite of all unfavourable appearances. Railway companies may rest assured that the true key to the problem of meeting the increased expenses is to be found not in increasing the rates and fares, but in giving to the public as much additional accommodation as possible, and at the lowest possible figures, for the more they attempt to popularise the use of their lines the more unpopular they will become. Already the increased working cost has tended to, and doubtless will in a great measure during the current year, curb the recent rate of expansion in the net receipts; and we are inclined to regard this obstacle to railway progress as more than temporary in its effect, especially as many companies have already decided in advancing the tariffs to cover the increase in the expenses.

In attempting to estimate future dividends and future course of prices we must of necessity turn first to the past to enable us to form a judgment at all reliable. If, therefore, we take the average dividend for 1871, and add to or take from that the difference realised in the first half-year we get a safe view of the probable minimum dividends of the entire year 1872. On this basis we find that the probable dividend of the North-Eastern will be 9⅜ per cent. for the year 1872, the North-Western 8 per cent., the Lancashire and Yorkshire 7⅜ per cent., the Great Northern 7⅝ per cent., the Midland 7½ per cent., the Bristol and Exeter 6½ per cent., the North London, 6 per cent., the Great Western 5 15-16 per cent., the South-Western 5½ per cent., the South-Eastern 5 3-16 per cent., the North Staffordshire 4 per cent., the Manchester and Sheffield 3¾ per cent., the Brighton 3½ per cent., the North British 2¼ per cent., and the Great Eastern 1⅜ per cent. We omit the Metropolitan, as being entirely beyond our power of calculation. Now railway property should pay at least 5 per cent. per annum. According to present prices, upon a 5 per cent. basis Bristol and Exeter stock is good for a rise of 20*l.*, Great Northern 14¼, North-Western 12½, South Western 3, Midland 4½, North-Eastern 20, and North Staffordshire 2. On the other hand, Great Eastern is 14⅝ above its proper price, Brighton 11, Sheffield 4¾, North British 35, and North London 8½. It may be said of nearly if not quite all those that are now above the 5 per cent. point that there are exceptional reasons why they hold the positions they do; but no explanation can be given to justify the irregular relation to the 5 per cent. price which is apparent amongst the heavy goods lines. They suffered severely from the increased expenses of working, and it appears that investors and speculators are alike wanting in confidence in the future. This reflects little credit upon their discernment, and it is not improbable that after the vacation season keener eyes and clearer heads will observe and soon remedy the inconsistencies which now prevail. One general rule is observable—the heaviest priced stocks are the cheapest. The same phenomenon is apparent in the Mining Market, teaching us to favour new issues of low denominations in every description of joint-stock enterprise.

Since the passing of the Act prohibiting time bargains in Bank Shares this department of business has been very quiet. Occurrences such as the losses of the Consolidated and Metropolitan, and those of the India and China Banks, through the failure of Gledstanes and other firms, have created a stir. This firm, with one partner a director of the Bank of England, and another a director and trustee of the London and Westminster, had the greatest opportunities of discounting, and hence the serious loss which will accrue to some of the joint-stock banks. One company is expected to lose about 70,000*l.* A destinctive and important feature of Bank Shares, regarded as an investment, is the heavy liability attached to this class of securities. Although, in some cases this liability is, to some extent, guarded against by the large reserve funds accumulated, there still remains just the possibility of the shareholders being called upon to a very large and practically unlimited extent. Banks are making large profits, and substantial dividends are paid, but it will be found that the price of the shares is in due proportion, and that but an ordinary percentage of interest can be secured by investing at current quotations.

Relative to American State Bonds, it may be said that the chief feature is the discrimination in favour of the older issues. In some of the Southern States the issues of obligations have been made so recklessly and corruptly, and in many cases for such inadequate consideration, and with the result of such oppressive taxation, that a fear is assuming tangible shape that when a change of party occurs repudiation will be attempted; and as no conceivable reason can be urged for dishonouring the ante-war debts, it is assumed that that class of obligations will be permanently recognised and regularly provided for. The following calculations as to the rate of interest yielded by American and Canadian securities at present prices will prove interesting now that the European money markets are flooded with American bonds of all kinds. The calculations are irrespective of accrued interest or income tax, and are reckoned at the highest current quotations. Where the bonds are in dollars, the calculation is at 4s. 6d. per dollar, the interest being taken at 4s. per dollar, the average price of gold coupons in London. United States 5 per cent. Funded Loan pays 4·96 per cent., 5-20's pay 5·71 per cent; 10-40's pay 4·52 per cent.; Massachusetts 5 per cents. pay 5·26 per cent.; City of Boston 5 per cent. pay 5·26; Atlantic and St. Lawrence 6 per cents. pay 5·88; Baltimore and Ohio 6 per cents. pay 5·82; Grand Trunk of Canada 6 per cent. Equipment Bonds pay 5·94; Great Western of Canada 6 per cents. pay 5·88; Illinois Central 6 per cent. Redemption Mortgage Bonds pay 5·82; Illinois and St. Louis Bridge 7 per cents. pay 6·78; Memphis and Ohio 7 per cent. First Mortgage Bonds pay 6·93; Midland Railway of Canada 6 per cent. First Mortgage Bonds pay 6.97; Northern Railway of Canada 6 per cent. First Preference Bonds pay 6·38; Pennsylvania Railway 6 per cent. Second Preference Bonds pay 5·94, and General Bonds pay 6·21. United Canal and Railway (New Jersey) 6 per cents. pay 6·00; Alabama 8 per cents. pay 9·11; City of New York 6 per cents. pay 5·85; City of Washington 6 per cents. pay 6·05; Atlantic and Great Western 7 per cent. First Mortgage Bonds pay 9·14, and Second ditto pay 10·36. Baltimore and Potomac Tunnel 6 per cent. First Mortgage Bonds pay 6·66; Central Pacific Railway 6 per cents. pay 6·49; Grand Rapids and Indiana Guanteed 7 per cent First Mortgage Bonds pay 7·32, and Unguaranteed 7 per cents. pay 7·87; Union Pacific Railway 6 per cent. First Mortgage Bonds pay 7·19; Alabama and Chattanooga 8 per cent. First Mortgage Bonds pay 6·69; Union Pacific Land Grants 7 per cent. First Mortgage Bonds pay 7·65 per cent. A vast number of bonds of projected American railways will be placed upon this market in the ensuing six months. Investors must be very careful in placing their capital in these schemes unless recommended by the highest houses here.

The more the paying capabilities of Tramway Companies are tested the more successful do they appear. The traffic continues steadily to grow on the opened lines, apart from the extensions brought into operation. Dividends of a gratifying nature have already been earned and paid, and there is a general feeling of security with regard to this new channel of investment in the public mind, which we believe to be well founded.

Trading and Manufacturing Companies are fairly safe and remunerative investments. They should, however, be avoided by persons who are likely to want their capital after a short interval of time, as they are investments which require holding for some time in order that their full advantages may be obtained. The dividends declared by iron and coal companies have been generally good, but the market value of the shares does not rise in like proportion; indeed, many of these companies, giving returns of 10 per cent. and upwards, are much below their value, a fact we can hardly account for by the supposition that this class of investment is not sufficiently appreciated by the pnblic, but is confined in a few hands; and the fear that the prosperity which has attended the companies during the past three or four years will be followed by a protracted period of adversity, of which, however, we see no prospect at present. There is ample room for good investments amongst these enterprises, the majority of which may be fairly expected to make highly profitable returns for the current half-year.

Telegraphs are coming into demand, and will go much higher. The total capital embarked in submarine telegraphy does not exceed 10,000,000*l.* sterling, 1,000,000*l.* of which is shut off from the market in the two Trusts recently formed. The balance is held by more than 12,000 investors, most of whom have already profited largely by that class of enterprise, and whose confidence in its increasing strength and substantial character grows daily, notwithstanding that the traffic receipts are only published at long intervals. The amalgamation of the several lines between this country and India has proved a great success. Telegraphs pay well, but good and substantial reserve funds to provide against breakages and other accidents are much needed.

Amongst Miscellaneous Securities, Hudson's Bay (which pays 10 per cent. on present price), London General Omnibus (paying 8 per cent.), and London Financial shares have lately risen into favour. Neufchatel and Val de Travers shares are much depressed. It is stated that the latter company has not taken delivery of an ounce of asphalte from the mine for nearly 12 months. About a year ago Neufchatel shares were quoted at 78*l.*; they are now worth only 1*l.* 15s., a fall of 80 per cent. Val de Travers shares, in the same period, have fallen from 45*l.* to 7*l.* 10s., a decline of more than 85 per cent. These are cheap shares to buy. A reform in the management is urgently called for, and is imminent.

We now come to an older form of enterprise than any yet mentioned—a primary industry of the human race—MINING. The practical application of science has fostered and developed mining enterprise in all parts of the world. The adventurer in search of iron, coal, tin, copper, lead, and zinc now obtains a higher price for his produce than, perhaps, ever before, and everything points to a growing prosperity for this branch of industry, especially when conducted within the boundaries of Great Britain and Ireland. In this country, in every mining district, there are as many and as valuable setts lying undeveloped as any which have in the past proved brilliant prizes. Indeed, with the convenience and safety of the limited liability principle applied to mining enterprise the successes of the past achieved under a costly, cumbrous, and uncertain system are likely to be far eclipsed. We will not weary your readers, or take up your valuable space, by enumerating the mines which have paid enormous dividends, and advanced no less enormously in market value, but at the same time we may be permitted to observe that opportune as the present moment is to make investments (for a permanence or for a rise) in almost every description of securities none offer such tempting and brilliant prospects of certain success as our home mines, whether at present dividend-paying or simply progressive. To mention names would be invidious, and might be thought to be casting a slur on others equally good but unnamed. From your columns investors may glean weekly sufficient information to guide them in their investments in mines, and we would urge them to take the present opportunity, when low prices rule, to invest at least a portion of their capital in mining adventures, which by rule of three can be proved to be the most remunerative form of investment yet brought to light by the enterprise of man.

Gresham House, London, Sept. 11. T. W. HARLAND & CO.

TIN IN THE CARADON DISTRICT—MARKE VALLEY MINE.

SIR,—Anyone who has visited the Cheesewring cannot but have been struck by the systematic manner in which series of mounds and pits, and artificial valleys have been made; these were the tin-workings of the ancients, and it was from these and similar formations in other parts of the county that our forefathers obtained their tin, faithfully believing that Cornwall's mineral wealth was centered in that alone; as time wore on other metals were brought to light, and in this district particularly there was a radical change, the great lodes traversing Phœnix and Marke Valley, previously very extensively wrought for tin, began to produce copper ores, and like the tin before it, there was no "stint," the deposits were of no niggardly character, they yielded their ores in thousands of tons, leaving a splendid profit to the fortunate shareholder; but there was no stopping place, it was as though the tin had said to the copper, "You have cut me out now, but I will return and be master yet, for I am of the more lasting order;" and truly it has returned with no less persistency than it did at Dolcoath. Look at Phœnix as an example. That sett worked for tin, then most successfully for copper, and under that *they have tin*, as their dividends from it show; indeed, when three figures are used to denote the value of a lode per fathom, it is not surprising that four should be required to set down the monthly profit—and, like its rich neighbour, I hear on good authority that Marke Valley is showing that it is not behind hand, having not only tin, but of splendid quality, and a great extent readily available, the copper workings having laid it bare in several points in such a way that stoping may at once be commenced. I expect very soon to hear the rattle of their stamps upon *tin* instead of *copper*, and seeing its name appear regularly in the list of tin sales, giving increased employment and regular dividends to the shareholders.

Many people appear disposed to blame the late management; it is not for me to vindicate it, but those who are acquainted with mining know that, generally, if one mineral is profitable others are neglected, and excuse must be made for those whose whole life has been devoted to copper workings. Most of us turn a deaf ear to what we do not understand; then why should more be expected from a miner than from the rest of mankind?

I cannot bring these few remarks to a close without first saying that I fully concur with your correspondent, "Presto," that tributing judiciously introduced, is of great importance, being not only the means of sending richer ores to market, but not unfrequently of making valuable discoveries for the company. OBSERVER.

Liskeard, Sept. 9.

ON TIN AND ITS ORE, THE STAPLE COMMODITY OF CORNWALL.

SIR,—Will you kindly insert this rather long letter in this week's Journal? I have asked you to do so from having had a longer experience in practical mining than most men.

For the last three weeks I have been on a tour through Cornwall, surveying mines and stamps. I have done so with the view of aiding those engaged, and to stimulate the ancient Britons. I some time since threw down the gauntlet, and asked them to come out, Yankee like, with their every spark of inventive genius, and try to improve their old stamps, or to bring out something new that would enable them to bring more tin into the market, or, in other words, to make hay while the sun shines. My call appears to have stimulated them; they have come out with three or four new plans for stamping. This is certainly a move in the right direction, and I believe one grand point is gained by using lighter heads with speed, as tin has not time to settle in them, as in the old stamps coffer, between the blows. But neither of these are as yet to perfection. This could not be expected when we look at the projectors, as neither of them are practical men. I admit these stamps are young, but they all appear to think them babies, and feed them with a spoon. If practicals will remedy this I agree a point is gained. Their stamps are lighter, can be erected with speed, removed in a short time, and stamp quick. But they are not what I expected to have seen; for the present nothing is saved but a portion of the first cost and in the time of erection; but this is even a godsend with the present price of tin. I will not stop here to point out one other defect that must come out, but I set them down as costing for stamping much the same as the old stamps. But when erected they will be the means of carrying out and stamping one-fourth more tinstone, and this will bring one-fourth more money into the country to be distributed to labourer, merchant, and lord, and a portion as dividend to shareholders. Even this is a grand point gained; but the battle of competition for the cheapest and most effective stamps has as yet to be fought out, as I believe the old stamps, so long clung to by the ancient Britons and their remnant, who stick to the old adage, "I will do as my father did before me," is dumb.

Stamping to perfection is a grand point to be gained, but it is not beyond the inventive genius of man. I cannot close this letter without remarking on the enormous loss of tin by slow and low stamping. I have long since discovered that tin can be stamped so low as to cause a quantity to wash off in slime, when all practical men know it is then found difficult and expensive to extract; in fact, I may say it never is extracted. Let a man walk from Tincroft Mine to the sea, and he will find the valley full of endless devises and machinery for catching tin, and it is still admitted by all that a deal goes into the sea under the old system.

I see nothing to prevent it. Tin in the old stamps has time to settle between every blow, and they stamp it too low, the grate is not of sufficient outlet, half its time it is choked up. Then I may be asked what is the remedy? I say use the half-saddle grates all the length, and at the end if possible let them be rougher, and with quicker stamping, when every grain of tin should pass the grate as soon as it is down to size; give more room round the heads for the flash; a strong rough grate, properly put in, should stand for months; work round grates outside to size to suit the tin; then let the stuff pass through a one-ended jigger, fixed where they now fix the drags; the wash from the jigger goes to buddles, with no handling the tin into the hutch and sieve.

I know the argument many will raise against this is that if the fine tinstones are not stamped to a low size the tin is not to be caught. Against this I argue that my jigger is not new to me. I worked it over 20 years since to catch lead, and it will catch all hitch tin, and reduce it to a quarter in bulk, when it can be re-stamped with care if required. Then let me ask those who raise this argument what portion of tin is reduced to slime in this fine stamping, and what it costs them to get it out of slime, and what portion of it goes down the stream to feed hundreds of bargain men and their workpeople and machinery below, and what portion of it goes even from them to the sea? If they go into this, and show a detailed account of cost and loss, I think they will discover that they will catch more tin with less cost on my plan.

In my late round I thought it absurd when I saw old practicals throwing poor rows back to stamps, with heads only lifting from 3 to 4 in., grates all choked with the little hitched tin in them. I admit the present high price of tin is tempting, but this work is not done business like; it barely pays, when they could put up a self-acting jigging-machine, and reduce it to a quarter in that way it would pay, and what goes off would never pay; the quarter caught in the jigger should be either stamped by itself or turned over to a good rubbing machine; I should prefer the latter. I met Capt. Pearce, of Dolcoath Mine, an old experienced man; he told me at once he had discovered that tin could be bruised so as to all wash away. I believe that quick stamping and the liberating of tin quick from coffer and jigger and the rows is the grand requirement of the day.

I am acting cautiously; looking at what is doing, and when I see the result of

the new moves I will take those things up on their merits, as I must have no wheelwork in stamps further than two to increase speed, and not this if it is to be done without, and nothing attached but engine, heads, and lifters, as I told the committee at the Polytechnic; not more than a mine smith could repair in an hour. Let my stamps be as young as it may it must feed itself. I shall employ no nurse with a spoon to feed it. N. ENNOR.

P.S.—Let the new stamps promoters hold back flash reports, and give the stamps time to heal their wounds, which are many.—N.E.

St. Teath, Cornwall.

WHAT TO SELECT—WHAT TO AVOID—No. XXVIII.

SIR,—We are approaching the termination of that which is now fashionably known as "the dull season," and, therefore, those who are hoping to secure an interest in sound dividend and progressive mines should no longer tarry, or they will surely lose the present most favourable opportunity of becoming participators in the rebound in value that may be regarded as the necessary result of the existing depression. All who have had any lengthened experience in the stock and share markets know that usually—that is, in ordinary years—an actual depression occurs at this period of the year, but in 1872 it has been more normal than real. This is being made evident almost every hour in the day, as upon the appearance of a few purchasers for any recognised marketable share the fallacious character of the depreciated quotations becomes at once apparent, while, on the other hand, holders who may either be compelled or are desirous to realise are obliged to accept low rates. Just now this is the case not only with mining securities, but also with every description of stock dealt in upon the Stock Exchange. The advanced value that is immediately established upon a purchase being effected shows most clearly that there is really very little floating stock seeking buyers, so that upon any active demand arising a considerable advance in price must of necessity follow; therefore, the writer repeats his admonition to the investor and speculator—Do not longer delay in making your selection.

CAMP FLOYD.—As has been the case with the Emma and the Flagstaff Mines, so just now is it with Camp Floyd; the "bears" are making their usual unprincipled attacks. It is a common saying in the mining territories of America that the value of a mine may be determined by the number of opponents to its title; the same argument would seem to apply to the London Stock Exchange, the difference being that instead of opposing the title of a proved valuable mine its shares are sold by parties who do not possess them, and then all sorts of questionable expedients are resorted to, with the view of unduly depressing the price, to enable the shares to be purchased at a profit. Bearing these facts in mind, the shareholders should ascertain for themselves the real value of the property in which they are interested. Upon investigation they will find that they possess a property second to none in Utah, although in the same district are the famous Emma and Flagstaff Mines. A private letter from a working miner has just been received, in which the writer states that the "bullion is the purest bullion silver produced from any of the mines in Utah, and by the appearance of everything about the mine there is no doubt that business matters are honestly and skilfully performed, and that the man who is in charge of the mining department has a head adapted for efficient mining; the mine is, indeed, a great prize," From the latest advices received Camp Floyd is producing about $9000 per week; thus, calculating the expenses at one-half the product, which is much beyond the actual cost, the net result exceeds a dividend of 2 per cent. per month. The working of the mill (as indeed is always the case in the starting of new machinery) has been more or less interrupted by stoppages, which will not occur hereafter, as the mill has been turned over to the manager by the contractors in the most complete order. At the starting of a mill the poorest class ores are reduced, leaving the better quality for subsequent treatment. The reserves are already very large; by actual measurement made some three months since there were over 4000 tons, although at that time the mine was only developed to a depth of 40 ft. Since, the explorations have been extended to a depth of no less than 200 ft., the ore yielding richer assays in the bottom than at any other point. Besides this, there were at the time referred to upwards of 3000 tons on the "dump." The stability of product is only a question of a little time, as the mill henceforth will run regularly without stoppages, while the yield of silver per ton of ore will materially increase. Some time since between 20 and 30 tons of very rich horn silver ore had been collected in the ore-house, which when worked will yield not less than from $500 to $1000 per ton. Some of the rich ore has been, and is still being, mixed with the ordinary ore, none of which has thus far been worked, as in the starting of a new mill, until all the crevices of the battery and pans have been well filled, the lowest class ores only are put through. Camp Floyd is located in the most favourable district of Utah, where the winter never interferes with the mining operations, thus guaranteeing a continual working throughout the whole year. The above facts should be duly weighed by *bona fide* holders, and are of equal value to those seeking a sound mining investment whilst its shares are as yet at a very low price.

VAN CONSOLS.—For some time past at this mine a most judicious course has been pursued in developing its resources rather than in making spasmodic sales of ore with the view of bringing about an artificial, and, therefore, an unstable price for its shares. It is a singular fact that while this most prudent course has been in operation (which it would be well if other mines followed) the shareholders, judging by the market price of the shares, instead of evincing their approval, have evidently sacrificed their interest. The most immediately important point of operation is the communication between Little's and Gundry's shaft, which will be effected in the course of a few days. This will enable important returns of ore to be made, and at the same time facilitate the opening of the mine upon a much more extended scale of development. There are indications of important discoveries being made which will establish Van Consols as no mean neighbour of Van; and when the price of its shares, taking the above facts into consideration, are compared with that of many other mines, they may fairly be considered as at least a most desirable purchase. FREDK. WM. MANSELL.

Pinner's Hall, Old Broad-street.

THE BOUNDARY QUESTION.

SIR,—In a letter under the heading of "North Crofty and South Crofty," in the Supplement to last week's Journal, "Shareholder" complains because these companies were asked to appoint, by a request from Mr. Tyringham (one of the lords), a competent surveyor at one guinea per month for each mine. Now, Sir, for my own part I consider it to be only right and just that some properly qualified and disinterested surveyor should be appointed to all the principal mines in the district, for the purpose of defining with more accuracy the boundaries dividing the different setts. Judging from the recent disclosures of certain mines in this locality which had become happy and prosperous from the pockets of their next door neighbours, one can but think that the time has already arrived when mine adventurers will cease to entrust any longer the definition of boundaries between mines to their underground agents.

It is not many years since the agents at Cook's Kitchen worked beyond their limits, and the shareholders, in consequence, had to put their fingers into their purses and pay Tincroft a large sum for damages. At about the same time the Bocean Mine, St. Just, through the agent's negligence, or else allured by a good lode, extended their workings into the adjoining mine, Wheal Owles—damages considerable. It is only a fortnight ago yesterday when the East Pool Company, through the blundering or greed of the agent, consented to pay to South Wheal Crofty, for an encroachment, no less a sum than 2102*l.* 11s. 2*d.* And, lastly, rumour tells me that the late agents of South Wheal Frances have been poaching heavily on the preserves of their neighbours. Although I dare say one may, with all propriety, venture to discount these rumours, but at the same time the fact that the shares in South Frances having receded from 4*l.* back to "giving away" leads me to suppose that the statements are not entirely void of truth.

Now, with these facts before us, I consider it high time to say to Capt. John and Capt. Joe that in the future you will please not trouble yourselves about any more dialling for the boundaries; but perhaps you will have the goodness to pay a little more attention to the general working of the mine, such as sinking the shafts straight, and driving actual levels instead of inclined planes, and be sure you see that the pitwork and skip-roads are laid down with greater mechanical precision. I assure you, my captains, that to be practically competent to drain an old mine and to secure it, and subsequently to sink and extend it—in other words, to be your own pitman, timberman, and shaftman—requires a man of an infinitely higher order than it does to be only a "good dialler."

I quite concur with "Shareholder" that the person he mentions is fully capable to keep forward the plan and section of North Crofty. Furthermore, I believe that if the boundary consisted of precious stones his moral standard is too high to admit of his stooping to remove clandestinely a single one of these stones. The same things can be said of hundreds of others, but in the meantime it cannot be denied but that there are a great number of agents who have a less regard for accuracy, and, looking at late events, do not forget to help themselves when an opportunity occurs. As a case in point let us take East Pool Mine. It has been stated that the agent there who had been entrusted with the keeping forward of the plans and sections is a splendid dialler, and a mappist extraordinary. I have been told also that the walls of the account-house are hung around with pictures, mineralogical and geological, and that they are beautifully delineated, for which the author has been presented with sundry prizes by the Royal Cornwall Polytechnic Society. And while standing in that Hall of Art and Science, one sees a group of downy pupils from the mining school, pointing gleefully to the pictures on the walls as being the handiwork of the *advanced* mine captain. But with all these accomplishments there comes the hard fact, which all had better read, mark, learn and inwardly digest, that only fifteen days ago East Pool awarded to South Wheal Crofty, as a penalty to their own stupidity, the sum of 2102*l.* 11s. 2*d.*

Camborne, Sept. 10. CAPTAIN.

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—As several shareholders have written to enquire why there were no returns of bullion between the 10th and 31st of July, you will, perhaps, allow me to state that the cause was the failure of the contractor to supply in time the new tuyeres for the furnace, which was consequently obliged to stop. The second new furnace is now running, and will thus in future give time, without stopping the weekly produce, to re-line or repair the one out of blast.

I take this opportunity to correct an error in my letter of the 5th inst. in the Supplement to last week's Journal—$855 profit per diem for the first 51 days should have been $818.

Sept. 12. THOMAS WESTBURY HALL, Secretary.

RICHMOND CONSOLIDATED MINING COMPANY.

SIR,—There are two matters especially associated with the operations in connection with this company which claim at the present moment, above others, our most serious attention, and the statement emanating from the secretary, and contained in the Supplement to last week's Journal, does not tend to mend them, but, on the contrary, in respect to one of the matters to which I allude—"net profit"—our worst fears are being realised. Our secretary, however, has thought proper to say in the report referred to—"They (the directors) have also received letters from the manager, containing estimates of results of working. These results, so far as they go, are *satisfactory*." Now, Sir, I venture to say that if the directors are satisfied with these results the great mass of shareholders outside (and here let me remind the directors that they, and not them, constitute the Richmond Consolidated Company, as, no doubt, the first annual general meeting will prove) are not satisfied, as a single glance at "copy of cables," given by our secretary (but of which he ingeniously omitted to give the total, as being calculated to contradict his assertion as to "satisfactory results") will prove; let us look at it. Well, first then, what was the gross product for 51 days, from May 21 to July 11? Why just $120,000. The above shows the gross return in value of the bullion produced, and the manager, in his last letter, dated Aug. 13, states that the estimated net profit for 51 days, from May 21, is $41,736.

Is it not obvious, then, that two-thirds of the gross returns are swallowed up by expenses, and it will be for the managers to explain as best they can at the forthcoming meeting how these very enormous and very unsatisfactory results have been brought about. Depend upon it they will have to give a strict account of their stewardship.

Now then for the other matter I have to refer to, and that is furnaces; but here I would make just a passing remark, by saying that if the foregoing statements of our secretary be correct I do not know whether it will be worth our while to build others, if the expenses attending them be in the same ratio—two-thirds of the gross product to be swallowed up by expenses. Well, what from time to time has been said about these and their erection? Will your readers turn with me just a moment to your past issues, and they will find it stated in the *Mining Journal* of April 27, page 388, as follows:—"It is expected that the new machinery and furnaces (plural) will commence operations on May 15. The company will shortly possess three of 65 tons smelting capacity each, and as the vast resources of the mine are now so fully proved, it may be confidently anticipated that the future profits will exceed the estimate given in the prospectus." And, again, in the same issue, page 398, it says—"The *Eureka Daily Sentinel* states that the Richmond smelting-works are to be supplied with new boilers and engine of the largest pattern. The machinery has already been ordered from San Francisco. It is thought that 60 days will place these works in splendid order for the summer's run. There is now lack of ore, and when the Richmond fires up the bullion returns will satisfy the anticipations of the most sanguine. Work in the Richmond furnaces is progressing rapidly, and everything is being got in readiness for the machinery now on the way. When again in operation these furnaces will equal anything in the world in the matter of producing bullion. It is certain the company have one of the finest mines in Nevada, and recent workings are developing large bodies of ore every day, the supply being inexhaustible." Then, again, in your issue of May 18, page 457, it says as follows:—"It is expected that on June 1 the two new 70-ton furnaces will be in operation." And, again, as late as Aug. 17, page 773, it says—"The second furnace commences work on Sept. 1." But what is the fact, Sir, at the present moment? Why, instead of these two 70-ton furnaces having been in full blast during the past three months, we are told in the *Mining Journal* of Sept. 7—"The second furnace has been built, but some difficulty has been experienced in obtaining the lining-stone. There is only one quarry in the district whence this stone can be procured, and the demand for it is very great. The manager, however, has arranged to send his own men and teams to quarry the stone, having contracted for a supply sufficient not only for present purposes but for re-lining the furnaces next year."

Now that Sept. 1 is passed, and the second furnace not lined, nor the stone required removed as yet from their resting-place for ages past, we may well ask when will it be up? Why not have said long ago there was a difficulty in obtaining the necessary stone for lining, instead of constantly raising the expectations of shareholders only to be again subjected to disappointment? Depend upon it this course of conduct is much more damaging to the company than the truth plainly spoken.

But, in conclusion, I would say there is no doubt whatever of the value of our property as a mine; and in reviewing what has been said respecting it, I would only ask your readers to turn to the Supplement of the Journal for May 18, and in an article by "X. X." on Silver Mining in America, he says—"Nevada, thus far, has been considered the great silver-producing State, more because of its famous Comstock lode, whose average yield for 12 years has been upwards of 2,000,000*l.*, and because of the more recently developed mines that are also becoming famous, as the Eureka Consolidated Company's mine, which has paid in the last 18 months nearly 400,000*l.* in dividends, on a nominal capital of 200,000*l.*, and without any working capital from the start. This company's mines were capitalised at 60,000*l.* in the London market, and rejected. The Raymond and Ely Company's mines, which are yielding at the rate of 500,000*l.* per annum, are in Nevada, as also the Pioche and and Meadow Valley Company's mines, all of which are becoming famous by their rich yields."

The Richmond Mine, owned by the Eureka Consolidated Company of California, and the Richmond Consolidated Company of London, bid fair to rival the celebrated Comstock by its enormous yield of bullion. As already stated, the Eureka Consolidated has paid in the last 18 months 400,000*l.* in dividends, and those who know say the Richmond Consolidated can pay that much in 12 months. If so it unmistakeably stamps the Richmond Mine as being second only to the Comstock. It is not to be wondered at that Nevada, containing such mines as those enumerated, should have such a silvery reputation, and that its annual yield is attaining such immense proportions, fed as it is by the thousand little streams that flow from its lesser mines.

Let no one imagine, much less believe, that silver mining in America is a thing of the passing moment. Its vitalising influences are becoming apparent to all who think upon the subject. As a realiable industrial enterprise it cannot be ignored much longer by the best financiers. Taking all things into consideration I, therefore, strongly advise my brother shareholders not to part with their shares, but come to the meeting. W. K. S. M.

ANGLO-BRAZILIAN GOLD COMPANY.

SIR,—In the Supplement to last week's Journal an extraordinary note appeared, signed "An Indignant Shareholder" in the above company. Its contents clearly showed that his indignation had blinded his judgment, for he started with the statement that our property has been brought into a "hopeless" condition. This I do not believe; for the news brought by recent mails has shown a continuous increase in yield, and that not from improved quality stone, but simply from an improved method of treatment. I am assured by the officers of the company that the stone treated is precisely the same in quality as that from which we formerly extracted but 1 oit. per ton, whilst now, by a simple re-arrangement of the machinery, we are getting 4½ oits. per ton.

But, secondly, he complains that the present state of affairs has been brought about by the "unwarranted interference of the directors" with the management of the mines. Well! and what have we to complain of? Pitangui has been temporarily abandoned, but what of that? It is true that that is not matter for rejoicing; but, on the other hand, it should be remembered that our capital is dwindling down, and that, in the face of this fact, to continue spending 700*l.* or 800*l.* monthly on a property that at present returns nothing would be absolute madness, especially when it is remembered that by a judicious expenditure of about half that sum upon Passagem a great and lasting improvement would be effected in our balance-sheet. That this is highly probable must be plainly apparent to an unprejudiced observer, when we consider—1. That the cause of the improved yield is but the increased depth of stamping, and not an improvement in the stone.—2. That the required alterations can be effected at a trifling expense.—3. That the supply of ore is very large, unless the officers of the company are deliberately deceiving us.—4. That the improved yield has been obtained by the alteration of barely one-third the number of our stamp-heads, so that it is very evident that in this respect at least we are as yet very far from being at the end of our tether. Yet, forsooth, if we follow the doccy set for us by an "Indignant Shareholder" we must whine and moan over our supposed grievances instead of looking matters fairly in the face, and trying to form a just estimate of our chances of success. Of course it is evident that we must have a call soon, but that will give us about 5000*l.*, which would carry us on for twelve months, even with a continuous loss of 400*l.* a month. Last month the loss at Passagem did not exceed 380*l.*, including alteration at Victoria south stamps, and since that time the costs have been cut down considerably. Besides, if need be, we should have little difficulty in raising preference or debenture capital, though considering our present improved prospects that contingency appears exceedingly remote. What, then, have "real" shareholders to complain of? I am painfully aware that, judging from the present price of our shares, our "apparent" losses are large. But I would venture to remind them that this is now the dead season as well in the mining market as in fashionable circles. Day after day we see in the papers the stereotyped remark, "Inaction again prevailed in the mining market." In the face of such circumstances as these is it at all strange that our shares should be depressed? Add to this the recent fall in Don Pedro shares, and the well-known fact that one mine declines in sympathy with another, no matter how remote the connection may be, and we have at once clear proof that no just estimate of the value of the property can be formed from its present market value. *Bona fide* shareholders will, of course, see that I am indirectly addressing them in replying to this anonymous attack, which, indeed, is sufficiently condemned by the character of its signature. So what reliance can be placed upon the statement that the writer is a shareholder when he is careful to withhold the means of proving it from persons interested in his remarks? Of course, the object may be perfectly innocent, but one is naturally somewhat suspicious, as for some time past there seems to have been an elaborate system of "bearing" in full operation. Only a short time ago the Emma and other American mines were attacked, and the success which then attended the lawless efforts appears to have induced them to turn their attention to Brazilian mines. These, though comparatively small fry, may yet enable them to turn a dishonest penny by frightening a few timid old ladies into selling at a great loss, which might easily have been avoided by holding a little longer, and affording the mine an opportunity of showing in a substantial manner that it still retains plenty of riches.

I must apologise, Mr. Editor, for the length of this letter, and ask the favour of its insertion in your next impression as a possible antidote to the mischief-making tendencies of an "Indignant Shareholder's" letter. W. IRWIN.

Throgmorton-street, Sept. 11.

DON PEDRO NORTH DEL REY GOLD MINING COMPANY.

SIR,—The state into which the finances of this company must shortly become, if active steps are not at once taken to arrest the progress of the present expenditure, is a matter of such vital importance that it imperatively demands the closest attention of the directors. The loss for June alone, we are told, exceeded 1500*l.*, when the return was 5810 oits., so that it has no doubt been very much greater during July, the gold returned during that month having fallen off to 4640 oits. When the changes were made in the management at the mines, in the early part of the present year, it was confidently hoped some benefit to the shareholders would be forthcoming, the more especially as the mining captain (engaged by the directors at a salary of 600*l.* per annum, and sent out with the superintendent) had expressed implicit faith in his own ability to treble the produce immediately upon his arrival at the mine. But what is the result? Instead of improved returns we have infinitely worse results and higher expenditure, the only consolation left to us being the uncomfortable fact that this said mining captain is receiving a very heavy salary for having induced the directors to accept a statement which has proved to the last degree fallacious.

It would be interesting to know why the services of this individual are retained, when the funds of the company are ebbing at such a disconcerting rate, for we must recollect that, although in the monthly statement furnished to us there still stands the item to the credit of the reserve fund, much more than that amount must have been some time since absorbed by the cost of the permanent pumping machinery, which cannot be at work for the next twelve months.

As calls are looming in the future, it is our duty to insist upon the exercise of the most rigid economy, beginning in Moorgate-street. A SHAREHOLDER.

Sept. 10.

MINING IN COLORADO.

SIR,—The hue and cry here, for the past eighteen months, has been "Reduction works." The cry to-day is more vehement than ever, and the ore blockade has reached that point at which the limited means of transportation are entirely inadequate to the requirements. These facts call both for increased reduction works and for the construction of a railway through the beautiful Clear Creek valley to Georgetown. I am reliable informed that steps are being taken tending towards the repudiation of the bonds voted last spring to the Denver, Georgetown, and Utah Company, preparatory to making arrangements with the Colorado Central Company for the extension of their line to Georgetown. The completion and operation of a railroad to the great mining centre, with cheap reduction works for low grade ores, seem now the only indispensible requisites to a brilliant prosperity for Georgetown and adjacent mining districts.

The mines in and around Georgetown are in a flourishing condition. The most notable are the Coldstream (formerly Maine), Pelican, Silver-plume, and Snowdrift, on Sherman mountain; the Brown and Terrible on Brown mountain; the Saco, Equator, Gilpin, and others, on Leavenworth mountain. Time being limited, I was only able to pay a brief visit to the Coldstream and Eagle Bird, on Sherman mountain.

The Coldstream, at a depth of 100 feet, is from 8 to 10 feet wide, and carries two separate streaks of very rich galena ore, aggregating 26 inches of solid mineral. An admirable system of mining is being carried out in this mine, under the supervision of Captain Phillips, the mining foreman.

The Eagle Bird, in close proximity to the Pelican, is mined by running a tunnel on the vein. The tunnel has reached a point 450 feet from the entrance, and has been run on a continuous though not a large vein of ore. The stopes over the tunnel have contributed largely to the produce of the mine: 300 feet from the entrance of the tunnel a shaft has been sunk 40 feet, and from this a level runs west, that discloses a body of ore 6 or 8 inches in width. At the entrance of the tunnel, another shaft has been sunk 41 feet, and a level run 100 feet on a very fine body of ore. I am indebted to Mr. Morse for courtesies shown while visiting this mine.

I took an outside view only of the Pelican. The large pile of ore gave but an indistinct idea of the depths from which it came. It has been estimated that at this mine alone there is, at the least calculation, 1000 tons of second-grade ore awaiting treatment.—*Georgetown, Colorado, Aug.* 14. D.

ANGLO-BRAZILIAN GOLD MINE.

SIR,—Had I not seen the letter in the Supplement to last week's Journal of "An Indignant Shareholder" I could not have believed that anyone could have written so absurdly about the Pitangue property; and, with regard to Passagem, when Capt. Treloar inspected this property in March, 1871, he stated with regard to the success of the undertaking that "there has been no want, I may say, of lode, no want of force, no want of stamping-power, but it is owing to the poverty of the lode." But it now appears that the primary condition of treating auriferous pyritical ore was not fully understood by the then conductors of the mine, or they were content with the smaller portion of coarse granular gold, which could be obtained with greater facility, and nearly paid working cost, and allowed the fine gold, which would have given handsome dividends to the shareholders, to run to waste.

In May last the new reduction officer commenced making experiments on Passagem ore; the depth of the stamp-beds was increased, &c., and the result has been that last month a produce of 4·682 oits. per ton has been obtained from third-class ore, which would have hardly yielded 1 oit. in former years, and under former treatment. In further explanation of the above, the force of water required to carry off the waste was by far too strong to allow the fine gold to precipitate, and hence whatever fine gold there was by chance disengaged from matrix in the previous stamping was driven to waste on the straking-floor. This further explains why, formerly, the proportion of gold dust in the gold produced was so extremely small in comparison to what it is now.

The alterations have only so far taken place at Wilde's, but will be extended to Victoria stamp, when we may reasonably expect good profits, for in 1870, when the average was only about 2 oits., there was a profit. The assay at Foster's was only about 6 oits., but that stated to be from Dawson's middle stopes in last month's report was 15 to 24 oits., a better produce still; and from experiments made from ore at Haymen's shaft as much as 85 oits. per ton have been yielded by assay. If the processes are carried out that are contemplated there will be a better produce extracted at a less cost still. I myself thought the produce that was stated could be extracted when the alteration in the machinery was made was too glowing; but no one can be blind to the fact, who has read the last report, that the produce where the alterations have taken place is the highest during the last five years, and, I believe, since the mine commenced.—*Sept.* 11. A SHAREHOLDER.

EBERHARDT AND AURORA MINING COMPANY.

SIR,—If the statement made in your Stock Exchange mining article last week be true—that our ore can be treated as cheaply at the Stamford Mill of the South Aurora Company as it has hitherto cost us for reducing it at their own mill—it is one of the strongest arguments yet adduced in favour of a change of management; and, under these circumstances, it may not be a matter of regret, from at least one point of view, that the mill has been destroyed, although it is said to have cost 60,000*l.*, or about 2*l.* 10s. per share, equivalent to about the present discount at which the shares are selling in the market. Of this amount one-half is returnable in the shape of insurance, while (according to the best authorites, totally disconnected with the management) the "mines never looked so well since they became the property of the present company."

Although I should be very sorry to lead my fellow-shareholders to expect that they will be able shortly to realise the high premium of 300 per cent., at which the quotation at one time stood, yet they may rest perfectly assured that the results from the mine will at no distant date cause an important advance in the market value of the shares. A SHAREHOLDER.

MARKET ANOMALIES IN AMERICAN MINES.

SIR,—Can any of your readers inform me the reason of such an extraordinary disparity in the aggregate market value of the following American mines:—

Emma, in 50,000, shares at 21/.	£1,050,000
Flagstaff, in 30,000 shares, at 16/.	480,000
Sierra Buttes, in 112,500 shares, at 3/.	337,500
Richmond Consolidated, in 44,000 shares, at 6/.	264,000
Camp Floyd, in 12,000 shares, at 14/.	168,000

Emma has to earn a net profit of 15,000*l.* per month to pay a dividend of 18 per cent. per annum, while a profit of only 2400*l.* at Camp Floyd (which is already being largely exceeded, although, as is always the case in the starting of a new mill and furnace, the lowest grade ore has as yet been treated) will pay dividends of over 24 per cent. per annum; and Flagstaff pays dividends of 24 per cent. per annum upon a profit of 6600*l.* per month.

To me the above facts are utterly enigmetical; and if any of your correspondents practically conversant with such matters can throw some light upon the subject, it would be of considerable benefit to many, the more especially just now when people are beginning to turn their attention to such questions to determine which are the best and cheapest shares.—*Liverpool, Sept.* 11. INVESTOR.

CAMP FLOYD SILVER MINING COMPANY.

SIR,—The rapid decline in Camp Floyd shares during the past week, without, as I can see, any tangible cause for it, constrains me to trouble you with a few statements of facts based upon a personal examination of this property no longer ago than the 20th of last June. At that time the mine had been developed by an open cut along the out-crop of the vein for a distance of about 450 feet. This open cut was about 12 feet wide, and from 12 to 16 feet deep. Good ore ore was taken from this cut for the whole distance opened. From the bottom of this cut three inclines were started down on the course of the ore. No. 1 incline was down at that time 140 feet; the first 70 feet was in a chamber of ore from 8 to 20 feet thick; in this chamber there was at least 2000 tons of ore in sight, assaying from $40 to $60 per ton. The next 60 feet passed through a body of ore assaying from $35 to $40. The last 35 feet was opening out into another large chamber of ore, assaying from $40 to $127 per ton. No. 2 incline was connected with incline No. 1 at 70 feet deep, with good ore between the two. No. 3 incline was down 130 ft.; this incline is 80 ft. from No. 1, and passes through the same chambers of ore as No. 1. In front of this incline, running back under the dumps, there is a face of ore 70 ft. long and 20 ft. thick, assaying from $30 to $70 per ton. In this face there was at least 1000 to 1500 tons. The amount of ore in sight in tunnels Nos. 1 and 3 below 70 feet could not have been less than from 700 to 1000 tons, assaying from $30 to $45 per ton.

Besides this, at the time of my visit there was about 3000 tons of ore on the dump

ready for the mill, the average of which could not go less than from $45 to $60 per ton. There was some 16 tons of very rich horn-silver ore in sacks, which were worth from $500 to $800 per ton; and when I was there this rich ore, which was continually being taken out, was not being sacked, but was mixed in with the ordinary ore on the dump. There were other openings of less importance made all along the stretch of 450 ft., in all of which good ore was being taken out. The outcrop of the vein upon which the Camp Floyd mines are located can be seen and easily traced for near or quite two miles. This connection with the continuous body of pay ore to the deepest point reached would indicate the existence of a regular vein. I am frank to confess that the panic caused by the circulation of the most improbable stories on the Exchange would no doubt have frightened me, as it has many others, had it not been for the fact that I have seen the property and know its merits; and I think I am safe in saying that no property on the Pacific Coast, with the same amount of development, shows a better prospect for future success. The ore from which the results of July and August was obtained was evidently ore from which the richer specimens of horn-silver above-mentioned had been selected, as it is customary in starting up a new mill to work the lowest grade ore until the mill machinery, together with the amalgamating pans, are in perfect condition to trial the richer ore without loss. The mill, and all its appurtenances, are of the most perfect character, and the management appeared, in all respects, to be all that could be desired.—*34, Old Broad-street.* J. E. BOWE.

WHEAL GRENVILLE.

SIR,—Your correspondent "Argus" may or may not be a shareholder in this mine, but it is certain that he is very ignorant of its *actual* position. He complains of a notice that appeared in the Journal contradicting some false statements that had been made about the mine, and he takes exception to the phrase "freely circulated," because he did not see the statements in the Journal,—as if statements could not be "freely circulated" in any other way! Besides, the columns of the *Mining Journal*, as everyone knows, are devoted to the dissemination of Truth, and to free discussion, and no one, therefore, would look *there* for anything false, and yet when the Truth is there told of a mine in which he "has been a shareholder for nearly 20 years," "Argus" writes you a long letter full of inaccuracies, calculated to injure his own property. Can one conceive anything more absurd and inconsistent? And now for the "facts" which "Argus" says "justify his opinions." In the first place, South Condurrow engine has not been overpowered for two years. It is not 12 months since the water became too strong for the engine to master, and then I believe not so much through "the great width and quantity of water coming through the lode," as "Argus" informs us, as from the almost unprecedented wet winter, which seriously affected mines with ample pumping power. "Argus" tells us that "he very much doubts the larger pumps at Wheal Grenville being able to keep the water," because "the South Condurrow lode is several fathoms wide, and full of water; and if cutting the capels or mere crust of the lode overpowered 8-in. pumps, he must be a bold man who says that 11-in. pumps will take all water from the lode itself." (The new lift is 12-in., not 11.) How does "Argus" know that the South Condurrow lode is "several fathoms wide" in Wheal Grenville. In South Condurrow Mine it is large in some places, in other places very small, but the size of it in Wheal Grenville cannot be ascertained until it is cut through. The 8-in. pumps were ample to drain the water so long as a breakage or any other hindrance did not occur. When we were delayed in pumping by anything of the sort the water would rise, and we lost two or three days in mastering it again. The larger pumps will obviate all this for the future; and has it ever occurred to "Argus" that the "capel" or "crust," as he calls it, being the softer part of the lode, is letting down the main body of the water, and that when we get into the harder part of the lode we shall find the water easier? At any rate, even if the water should increase to the extent of "Argus's" alarming prognostications, our agents have no fear of being able to master it; and which opinion will the adventurers accept—that of an anonymous writer, or that of their own experienced and trustworthy agents? Any person with the slightest knowledge of mining affairs knows that if a 60-in. cylinder-engine can keep a shaft drained 140 fms. deep with a 12-in. pump, at four strokes per minute (which Wheal Grenville engine is doing at the present time), it can be very safely worked to a far greater amount of duty.

With regard to a new shaft and cross cuts being required, and to extend over a period of two years, there is no probability of either. The present cross-cut at the 140 was commenced in March, 1871—six months short of the time "Argus" states it has been driving. I remember when it was commenced some very knowing and clever persons of the "Argus" type said we should not cut South Condurrow lode in less than 60 fathoms driving, and professed to know a great deal better than our agents did about the matter; but what is the actual result? Our agents have not the slightest doubt we have cut the South Condurrow lode in 16 fms. driving from the shaft, and at a distance of 60 fms. from the boundary. The lode, as far as seen, is underlying rapidly south *towards the shaft*, and so far from future cross-cuts to last two years being necessary, the lode may fall into the shaft in 10 or 15 fms. further sinking, though, of course, no certainty can be arrived at until the lode is cut through, and its actual underlie ascertained. With respect to the 110 cross-cut, this was commenced from our northern shaft, about 90 fms. east of the 140 cross-cut, and 16 fathoms from the boundary. After driving it a short distance it was stopped, because it was thought if the lode *was* cut there we should get no "backs" or height upon it, and we deemed it more advisable to sink the shaft instead, and which has been done to the 120 fm. level; and if the South Condurrow lode should underlie south as fast as we anticipate, it will fall into this shaft in 10 fms. further sinking, so that even at this shaft, where, as "Argus" says, "we quietly dropped the cross-cut," no two years cross-cut will ever be required,—probably n ocross-cut at all; but, as I said before, until the actual underlie of the lode is ascertained in the 140 cross-cut no positive opinion can be given.

"Argus" says he communicated to you after his investigation of the matter "that the 140 fm. level cross-cut was the one to look to." Now, everyone connected with the mine has always considered the northern shaft, from which the 110 fm. level cross-cut was commenced, the more important point, and it is extremely probable that had we continued the cross-cut we should have seen more of the South Condurrow lode at that depth than was anticipated. How could "Argus" tell you the 140 fm. level cross-cut was the "one to look to," when, as he says, he knew the 110 fm. level cross-cut was opposite the rich part of South Condurrow" (of course it was not, the then rich part of that mine was some fathoms off); but how does he reconcile these statements? If we should be fortunate enough to cut a bunch of tin in the 140 fm. level cross-cut, so much the better, but that at and about the northern shaft, from which the 110 fm. level cross-cut was commenced, the main features of the mine exist there is scarcely a doubt. In this shaft the South Condurrow lode from its rapid underlie will probably overtake at the 130 fm. level the lode from which our present returns of tin are obtained; so that here again "Argus" shows a lamentable ignorance of the subject he is writing upon.

To show you that the officials of the mine have always looked upon the northern shaft as the more important feature, I will give you an extract from a letter from the late Capt. G. R. Oilgers, after his inspection of South Condurrow:—"Our north shaft will be the permanent shaft for working this mine, and no mistake, and I would rather than 50*l.* or 100*l.* of my own money that that shaft was as deep as the flat-rod shaft." "Argus" further tells us that on investigating the working plan of South Condurrow he found that the 110 cross cut at Wheal Grenville was only equal to the 90 at South Condurrow, and was the first to inform the agent of Wheal Grenville of it, and insinuates that on his information the 110 cross-cut was "quietly dropped." Ever since we have worked Wheal Grenville we have known that South Condurrow has an adit level, whereas Wheal Grenville has not, and there is consequently a corresponding difference in the various levels of the two mines, so that the result of "Argus's" investigations was nothing more than our agents knew long before the 110 cross-cut was commenced. In concluding his letter "Argus" says:—"The great mistakes made by the South Condurrow people were tinkering with machinery instead of grappling with the water difficulty." I have nothing to do with the mistakes of our neighbours, who I think can fairly retaliate upon "Argus" for having "tinkered" up a letter on a subject he is not acquainted with.

I am sorry to trouble you Mr. Editor with such a lengthly communication; but though "Argus's" statements are more silly than mischievous there are some persons who accept everything as gospel that they see in print, and I am, therefore, anxious to expose the absurdities of his letter, the more so as it is somewhat difficult to imagine a person's object in writing a letter calculated to disparage a mine in which he says "he is now and has been a shareholder for nearly 20 years."
George-yard, Lombard-street. JOHN WATSON.

P.S.—Since the foregoing was written I have received a telegram from Capt. E. Hosking, our managing agent, that tin has been met with in the 140 fm. level cross-cut on South Condurrow lode. I expect it will be two or three days before I receive full particulars. J. W.

CRIDDIS COPPER MINE, PADSTOW.

SIR,—This mine is about to be started again, under most favourable auspices, by a London company, the directors being business men, of means and standing, in the City. The last time the mine worked it returned ore upon assay near upon 40*l.* per ton for grey copper and silver, supposed to be the richest ore in the county. I have not the least doubt that if it had been then practically worked it would be working to this day. I have been underground on several occasions, so I could see how things were carried on below as well as at surface, and especially when the so-called manager lived some 13 miles away from the mine. You can judge how things would be when I have known him stay away from ten days to a fortnight, and never be on the mine. I have been told by some of the miners that he would go underground, and some times he would not. I say, then, it is not giving the mine a fair chance to see whether there was anything there or not for the adventurers. You may depend upon it there are several mines in the district in the same way (badly managed) that have stoped working for some years (that I know), mines, no doubt, which would pay with good management now, whereas, if they had coined sovereigns last time they never would have paid under such management. Now it is about to make a fresh start. I, as one, will come in as a shareholder, and some of my friends in the locality of the mine will, I know, take shares as well. But we must have a practical man at the head, one who knows his work; and he must live on the mine, or near about, so that if anything happens he can be called at a moment's notice. There is one great advantage this mine has over the generality of mines—no land carriage is required to get the materials on the mine, such as coal, timber, and everything connected with mining. A vessel can lay alongside at the quay and discharge her cargo, which is not more than 100 yards from the mine. I hope these few remarks may be of some assistance for the future working of the mine. In conclusion, should it start I wish them every success in the undertaking.
Sept. 11. AN ADVENTURER.

A COMPARATIVELY NEGLECTED DIVIDEND MINE.

SIR,—I find it very puzzling to account for the preference given to one or two mines, because they have paid a single dividend, over another regular dividend mine. Terras, by the way, quoted at 5 prem., has only paid a dividend on half the shares; Wheal Whisper has declared a dividend, and is quoted at 3 or 3½ prem. Now, Castle an Dinas has paid dividends since its first commencement, and yet shares may be purchased at a trifle over par. Besides, it has had the whole of its machinery erected for several years, which cannot be said of either of the mines I have mentioned, against neither of which, be it understood, have I a word to say. The fact of Castle an Dinas not having its registered offices in the City cannot wholly account for this, though it may in part. The veriest tyro can at once see that compared with Terras and Wheal Whisper the price, *a fortiori*, should be 9*l.* or 10*l.*, instead of about 2*l.* 5*s.*

I really begin to think that the prosperity of the company has made the directors indifferent to making any statements beyond the agent's reports. They know, no doubt, that the shares are largely held in Cornwall; and to preserve the company from the attacks of "bulls," "bears," and speculators in general, they go to the other extreme—never cry out "Great is Diana" themselves, nor let it be proclaimed, as a rule, by brokers. I think this is wrong, because from my own knowledge of Castle an Dinas, which returned profits when tin was only 50*l.* a ton, I consider the present price much too low. I think your readers will be of the same opinion when I remind them that the company is only divided into 5000 shares, of 2*l.* each, a sum much less than promoters have often obtained for bare sets. Some 13,000*l.* worth of tin has been raised, chiefly from the great country elvan (the same as in Belowda Beacon), where it is quarried as in the famous Carclaze Mine, St. Austell. The tin ground raised here, which yields 25 lbs. of tin to every ton crushed, is broken and carried to the stamps for 1*s.* 4*d.* a ton, showing very convincingly that at least 20 lbs. may be considered clear profit. Relatively speaking, there is no limit to this productive elvan, the riches of which have been highly spoken of by Capt. Pascoe, Mr. G. Henwood, M.E., and many others. The lodes are not reckoned at all in this calculation.

A 38-in. engine drives 48 heads of stamps; and it is proposed eventually to double this number. At present the engine-shaft is only sunk 25 fms., but the 10 fms. of stopes will employ the stamps for a long time to come, even when the new heads are working. Though I could say much more, perhaps enough has been said to show that Castle an Dinas is not rated at its merits. I would say to all who wish to make money without any of the attendant risks of mining, "Buy as many Castle an Dinas shares as you can, hold them for a twelvemonth, and see if you do not realise cent. per cent."—*Manchester.* C. B.

GREAT LAXEY—THE STRIKE.

SIR,—I have no fear whilst so many parties are driven from their homes, that you would not allow a suggestion to appear, even if it were written by a very humble correspondent of yours. If the strike still continues, could not five of the most respectable mine agents be called in to settle between the shareholders and the miners; three of whom might give a decisive word, and which should be binding on all parties?—*Goginan, Aberystwith, Sept.* 9. ABSALOM FRANCIS.

GLAIN PEDROR MINING COMPANY.

SIR,—Enquiries have been made by shareholders as to the constitution and prospects of this company. It seems somewhat strange that information should not be readily forthcoming, either from the directors, secretary, or mine agent, more especially as it would seem from the share-list that shares have been in considerable demand, having reached about 20*l.* premium. If the *late* E. Brewis was the secretary (I use the word *late* for reasons that will be patent to most of your readers) there might be cause for the mine being shrouded in this mystery. The question for the shareholders to consider is whether they will allow this to continue any longer. In East Bottle Hill the shareholders held a meeting with the least possible delay, formally dismissed Mr. Brewis and elected a responsible and trustworthy successor. Through taking these prompt measures the mine was saved from drifting into the Stannaries Court. It is understood that Messrs. Bell and Co have been disposing of shares, and it would have been well if they had answered the enquiries of "A Shareholder." It is not too late now for them to inform the shareholders generally who the present secretary is, and where the registered offices of the company are situate.

I think, too, that the shareholders should meet together as soon as they can, examine the accounts, and place the mine in better hands. I would also recommend that a practical and independent mining captain be sent to inspect the property, and so see how far the statements in the prospectus have been fulfilled. Everyone would then soon learn whether Glain Pedror possessed any vitality. At present I find it very difficult to obtain even an offer for shares held by clients of mine, while I cannot but think that the remedy is in the hands of the shareholders themselves. Those shareholders who think my views are worthy of consideration may inform me of their present holdings and their addresses. FERDINAND R. KIRK.
Birchin-lane, Lombard-street, E.C., Sept. 12.

GREAT WORK CONSOLS.

SIR,—As a shareholder in the above mines, I have been canvassed for my support in the appointment of a successor to our late much-respected purser, and I presume most of my co-adventurers have been also. Now, as rumour is rife about our liabilities—it is hinted in some quarters "they are pretty heavy"—and having made many changes of late, whether judicious or not it is not for me to say at present; but one thing I do hope we, as adventurers, shall be unanimous in demanding at our next meeting—a cash account and balance-sheet as near as can be arrived at of our real position up to the day of the meeting, so that if a call is necessary it be no longer delayed, as it will be worse than madness to go on as we are working the mine for any end of our leading spirits either as politican or merchant, as some one must "pay the piper."—*Helston, Sept.* 10. A SHAREHOLDER.

OBSERVATIONS ON MINING IN WALES.

SIR,—I arrived at the town of Aberystwith about a week ago, after an absence of some years, and was much struck with the remarkable improvements which have taken place. It shows to us all that we live in progressive times. The scenery surpassed my most sanguine expectations. From here I visited the celebrated Devil's Bridge, where I enjoyed the most salubrious air, and the scenery about caused me to think it one of the grandest phenomena in nature. After partaking of a short repast I wended my way round to the wonderful ruins of Strata Florida Abbey, where a most noble arch is still left entire, to behold which would amply reward the tourist for his time. I should remark this to be about 15 miles distant from the above town, and a mile or so from a nice village called Pontrhydfendigaid. Having heard of mines being in the neighbourhood (from my guide) I had only time to visit two of them—Florida (so called after the abbey), and the South Lisburne Mines, both of which seem to be of great promise, as I saw some nice heaps of mineral on surface at each place. Having been in this neighbourhood six years since, when men were obliged to leave their homes and seek work elsewhere, I was agreeably surprised to see that the mines were turning out so well. Great credit is due to the manager and agent for their practical experience and assiduity in conducting the works so creditably. Of such men any company or companies need be proud, from the information given me of their sobriety, character, and intelligence, in conjunction with their earnest zeal for the performance of those important duties incumbent upon them. A TOURIST.
Aberystwith, Sept. 11.

DENBIGHSHIRE CONSOLIDATED MINING COMPANY.

SIR,—As a propietor of shares in lead mines in Wales I was induced to visit, amongst others, the Denbighshire Consolidated Mines, and beg to offer you results of that inspection. I was much pleased with what I saw last week. Capt. Pryor seems to be most energetic, and although accustomed to see large numbers of men in different concerns with which at times I have interested myself, yet I have never seen a set more hardworking. The engine appeared to do its work admirably, and now that they can get the water out in two or three hours, and shortly fix the plunger, I cannot imagine anything to prevent driving to get lead in every direction. I was most agreeably surprised to find so many unquestionable evidences of mineral riches (I use this word advisedly) in the whole of the sett. I shall be disappointed if with such a manager the mine does not turn out a great prize. Energy and economy, which seem to have been well exercised hitherto, are only required, in my opinion, to make the property speedily productive. The lead is there unquestionably, and so far as I could ascertain the future plan of working all seems to promise abundant success to the shareholders. There is one thing that adds to its value—the new land recently obtained, from the fact of a valuable lode running from the adjoining mines. I am not disposed to be over sanguine, but it seems the company cannot be other than a success, if worked energetically, economically, and with judgment—keep down all unnecessary expenses, but let there be no cheese-paring. I trust that the directors will not suffer a mine of such great riches to reproach them with lack of energy. I ought to add that I am always suspicious of new undertakings, and went to see the mines to be sure I had not made a mistake. I, therefore, made my enquiries respecting the sett, and was much gratified to find it well spoken of by persons who could not gather from the nature of my questions that I had any particular object in asking them; moreover, when I was at the mine no one knew who I was or my object, till I introduced myself to Captain Pryor.

It is almost unnecessary to say I examined the country geologically, and traced the course of the lodes which have been worked from surface, and from what I saw I should think it impossible for Denbighshire Consolidated mines not to turn out rich. I shall watch the progress of the mine with great interest.
Sept. 7. A CLERGYMAN, AND HOLDER OF THIRTY-FIVE SHARES.

NORTH LOVELL MINE.

SIR,—Some time ago this mine was represented as one of the coming prizes, and the manager's last report states that "it opens out very encouragingly." No doubt many shareholders, as well as myself, would like to know why fortnightly reports do not appear in the Journal. Many of us know nothing of the operations in the intervals between the four-monthly meetings. Such reports would be specially interesting now that they expect to intersect the East Wheal Lovell cross-course and lode No. 2. As I see our manager's name appended to reports of Medlyn Moor, another mine in the Wendron district, I should like to know if two separate properties in such close proximity can be worked for the full benefit of the respective proprietors under the same management. Is there not now a lack of men at the North Lovell? However, let us have fortnightly reports, and then we shall be better able to judge of our progress. O. P.

WHEAL BRITAIN.

SIR,—As "R. S's." letters in the Journal respecting me seem to savor of something more than a desire to set one whom he regards as an erring brother right, I feel myself under the necessity of giving the cause of their appearance. During the latter part of July "R. S." called on me with apparently good feeling, and more than usually interested in my success in the discoveries made in Wheal Britain, but the conversation was soon turned by his soliciting of me a favour which I could not grant. He directly left me, and hence, I fancy, the spleen which manifested itself in a letter a few days after (Aug. 30) under the heading of Wheal Britain. Though not disallowing—as a St. Agnes man—my parishional ties to the "Bear Hunt" fraternity, yet I would apprise "R. S." that my knowledge of the extent of granting powers for minerals possessed by the Lords of the Manor on which I was born and have lived, exceeds a little what he would have the public believe; and I challenge "R. S.," or any other person, to substantiate counter claims to the tin in my sett. I hereby charge "R. S." if anything further appears from him on the matter I will sue him for damages for an attempt to undervalue my mining property in public estimation, and defaming my character by the circulation of such gross untruths. If such individuals as "R. S." were to attend to their own business, and cultivate an inflexible principle, they would succeed better in life, and be held in high repute among their neighbours.—*Sept.* 11. JOEL PHILLIPS.

COST OF COAL, AND ECONOMY IN MINING.

SIR,—I have read with much interest the excellent and opportune letter of Mr. R. Larchin, in the Supplement to last week's Journal, on Economy in Mining. The proprietors of mines would do well to give their very serious attention to the subject, when it will not be long before they will discover that they are unnecessarily throwing away a great part of their profits in over consumption of coal to keep in work antiquated and most expensive machinery, when the work may be done to advantage, in some cases, at one-tenth of the cost.

It is most remarkable that with all the improvements introduced there are to be found men on their legs still ignorantly advocating the most obsolete and expensive plans, and applauded in their advocacy, the more to mislead the public. The proprietors of mines will do well to investigate the subject, feeling assured that Mr. Larchin, who stands high in reputation as a mining engineer, will elicit their gratitude for bringing the matter to light. W. DARLEY.
Alwin-road, St. John's-road.

[For remainder of Original Correspondence see to-day's Journal.]

Royal School of Mines, Jermyn Street.

[FROM NOTES BY OUR OWN REPORTER.]

LECTURE L.—Amongst the other concomitants (said Mr. SMYTH) of the wonderful progress made in mining in the first part of this century, a most important part was played by the introduction of the steam-engine, and the remarkable efficiency attained by the Cornish engine as regards the quantity of work done for a given amount of fuel. Newcomen's atmospheric engines were introduced in 1705, and continued to be the means of lifting the water from mines—with intermediate improvements by Smeaton—for many years. Then came (patented in 1769) the plan of condensing the steam in a separate vessel, by means of which Watt was enabled to make a duty of from 16,000,000 to 17,000,000. What is called "the duty" is 1,000,000 lbs. of water raised a foot high by the expenditure of a bushel of coals, weighing 94 lbs. They had been in the habit of getting 6,000,000 or 7,000,000 out of the bushel of coal, while Watt went up at once to 17,000,000. The marked improvement made in Cornwall after Watt left the county has now strongly deteriorated, and that to such a degree as to make it a source of serious regret. The most notable improvement after Watt was the invention of Trevithick, who employed high-pressure steam instead of the low-pressure of 40 lbs. to the square inch. Then came the introduction of the tubular or Cornish boiler, in which the fire goes through a central tube, and jacketting the boilers to make them retain their heat. These Improvements, and others made by Hornblower, Woolf, Bull, Sims, West, Harvey, and Capt. Grose, led in a few years to great competition as to the amount of work done and duty performed by their several engines. From an average duty of 17,000,000 performed in Watt's time, the reports published by Capt. Lean show an amount of 28,000,000 attained in 1829, and of no less than 60,000,000 in 1843, whilst the best engine then tested had actually given an average duty of above 96,000,000. The most remarkable case on record is that of Austen's engine of 80-in. diameter, erected by Mr. Wm. West, at Fowey Consols Mines, and which, on being reported in 1834 to give a duty of nearly 98,000,000, was the occasion of a searching investigation and of a practical experiment, conducted by other engineers and mine agents formed into a committee. The shaft was at that time 131 fms. below the efflux point of the water, the lifts of 15 in. diameter for the three upper, and 10¼ in. for the two lower ones; the length of the stroke is 9 ft. 3 in.; the pressure at the boiler, 36½ to 45 lbs. per square inch. The astonishing result was a declared duty for the 24 hours of experiment of 125,000,000. Similar experiments by a committee had shown in December, 1827, that Woolf's engine at the Consolidated Mines gave 63,663,473 lbs. duty, and Grose's engine at Wheal Towan, St. Agnes, in 1828, 87,209,662 lbs. These duties, compared with the old duty, show ten times the amount of work obtained from the same fuel. But if these large duties are compared with what is done now, the retrogression is almost as remarkable as the former advance. Capt. Lean, in his reports, says that the average duty has fallen materially, and that it is a very good engine indeed which does more than 60,000,000, a very large proportion standing considerably below that. And I confess to being somewhat shocked by hearing at the Paris Exhibition French engineers say that there was nothing to admire or to learn in respect to English engines. Indeed, there is no doubt that the Cornish engines are not in the condition they were described to be in by a former generation. Several causes have been alleged, but they are in no sort an excuse, for this deterioration. For instance, M. Kely, inventor of a double cylinder engine, at work at the zinc mines of Altenberg, went to see a double cylinder engine erected by Sims, at Redruth, and found it (he says) in an incredibly dirty state, and it is remarkable that he should find that a district once noted for high duties should have relapsed into comparative inefficiency. I believe, however, the double cylinder engines of Hornblower, Woolf, and Sims will bear comparison with any continental engines. Three of these engines, each having two steam eylinders one within the other, the larger being 12 ft. and the smaller 7 ft. in diameter, with a stroke of 10 ft., have drained the great lake at Haarlem, and are now employed only at intervals on a smaller scale to keep the water from rising, but they are notable examples of the Cornish system of pumping being applied to engineering work of quite a different character.

Although in regard to the quantity of water pumped from various mines I have not given any statistics, you will have gathered the importance in an economical point of view of the matter by the mention I have made of certain mines being armed with several pumping-engines on a large scale, and some of enormous calibre. Amongt these may be mentioned a remarkable engine at Wheal Vor, with a cylinder of 100 in. diameter, and capable of giving over 11 ft. stroke. In metalliferous mines, however, the pumps themselves do not often exceed from 12 in. to 16 in. in diameter. In the neighbourhood of Mold pumps may be seen from 20 in. to 22 in. in diameter, and second sets employed for one and the same mine. In the Forest of Dean some remarkable instances are to be noted. For instance, there are the great pumps employed by Messrs. Crawshay, at the Shakemantle Mine, worked by a direct-acting engine, with a diameter of 27 in. Similar machinery as to size is employed at Dolgelly, in South Wales, but these are exceptional cases.

The ordinary beam-engine is that most used in Cornwall, but besides that county a good many have now made their way into certain northern colliery districts and foreign mining countries. Other forms of engines, however, are preferred as getting rid of the necessity of building up a lofty wall to bear the great beam, which has to be moved at each stroke, and which often weighs many tons, being now made either of cast or wrought iron. One of these plans was to place the piston-rod below the cylinder, and to press the rods downwards, but none of the engines erected in this way can be quoted as comparing satisfactorily with the amount of duty done by the ordinary Cornish engine, although it is fair to add that they have not been tried against each other. At the beginning of this century it was proposed by a Cornish engineer, named Bull, to place the piston-rod so as to make it simply the main rod of the pump, and thus merely lifting the piston would be sufficient to raise the rods. This direct-acting principle, as it is called, has the advantage of great simplicity, which has led to its adoption in foreign mines and in the North. Its great drawback is that the shaft has to be given up to it entirely. There is a large engine of this kind at the Mostyn Collieries at the mouth of the Dee, said to be doing excellent work.

Then comes the question of the construction of the beam, and a most important question it is. In old mines a great mass of timber was used, strengthened with I rods, but in the early part of this century timber was replaced by Boulton and Watt with cast-iron. This material, however, is extremely brittle, not able to be subjected to any considerable amount of shock without risk, and great accidents have happened therefrom. That at the New Hartley Colliery, in 1861, sent a thrill of horror through the whole country. The beam there was 34 ft. in length, and 4 ft. 2 in. in depth. The weight of it and its fittings was 42 tons. A fracture took place across the centre, and one of the parts fell into the shaft, which caused the destruction of the bratticing and means of exit, and the loss of the lives of all below, there being no fewer than 204 men and boys in the workings at the moment. This terrible catastrophe was rendered more fearful by the prolonged time which elapsed after the accident ere communication could be restored with the workings, and so day by day the dreadful fact that all must perish became realised. If the beam had been made of wrought-iron this would not have occurred, and since then more of this safer material has been employed. Cast-iron, indeed, has many disadvantages, for if it has to be carried across a new country it might at the end of the journey be found to have been broken by a jerk of the wagon. This would not happen with wrought-iron, and the latter is, moreover, with the same strength three-fifths lighter, by which a great saving would be attained in a long journey. Wrought-iron beams are constructed in various ways. At Clay Cross, for instance, the beam of an 84-in. engine is formed of two slabs of rolled iron, 36 ft. long, 7 ft. deep in the centre, and 2 in. thick. The slabs are braced by strong cast-iron distance pieces bolted between them, the whole beam weighing 32 tons. At North Seaton and Cambois, near Newcastle, and at East Caradon and other mines in the West, beams have been built of boiler-plate and angle iron; and it is not yet quite a settled point which is the best mode of construction with wrought-iron so as to ensure equal rigidity with cast-iron, a quality which the latter material with all its faults must be acknowledged in a high degree to possess. A combination of boiler-plate and angle iron is, however, most general. On all these points, and indeed the same thing may be said of all the details of pit management, there are differences to be observed in different localities. Good mine managers, therefore, ought to take every opportunity of seeing what is done out of their own districts, and of testing their own plans by comparison with others, and especially with those carried out in mines of acknowledged excellence, remembering that nothing is too trivial for notice if it adds, however little, to the economy or convenience of working, or the safety and comfort of the men.

THE BURLEIGH DRILL IN THE HOOSAC TUNNEL.

The following paper was read at the recent meeting of the Miners' Association at Falmouth, by a son of Capt. Tonkin, of Dolcoath, in reference to the working of the Burleigh drill in the Hoosac Tunnel, Massachusetts:—

The Hoosac Tunnel is situate in the State of Massachusetts, about 100 miles from the City of Boston, on the Troy, Hoosac, and Greenfield Railroad. It is intended to pass through the Hoosac mountain. The tunnel runs east and west; it will be, when completed, 4¾ miles in length; it is cut 24 feet wide and 19½ high clear of the rails. The east end, in which I was engaged up to March last, had been driven about 2 miles; the west end about 1½ mile; and about a quarter of a mile had been driven east and west of the central shaft; making a total of 3¾ miles, leaving a mile more to be excavated, which will be accomplished, at the present rate of working, in the spring of 1874. This tunnel was commenced about 22 years ago, but has not been worked continuously from that time; it will cost when completed about $7,500,000. The present contractors, Messrs. F. Shanly and Co., are pushing the work through with energy, and will undoubtedly finish their contract in the summer of 1874, the time allotted them. The strata are mica schist interspersed with veins of quartz from 1 in. to 1 ft. thick. The dip of the strata is east 70°. There is no mineral found in this tunnel excepting a little copper and sulphuret of iron. The headings are carried the full width of the tunnel and 8 ft. high. The Burleigh rock-drill machine is used in them. These machines, when in good working order, will drill a hard lode 3 ft. deep in 15 minutes with water, but in drilling a horizontal hole it will not drill as fast on account of the dust remaining in the hole. In the heading in the west side of the tunnel the holes are drilled from 7 to 9 feet deep, which are blasted at the termination of each core. These holes, about 15 to 20 in number, are charged with nitro-glycerine, which is exploded by an electric battery simultaneously, fixed about 300 feet from the heading. The operator is protected by wooden doors, 8 in. thick. About 125 ft. is excavated in this heading monthly. In the east heading the holes are not drilled so deep, seldom more than 3 or 4 ft.; the rock being softer and the dip of the strata being in their favour, short holes pay better. In this heading common blasting powder is used. They blast about 20 or 30 holes every four hours by an electric battery, as in the west heading. This heading advances about 150 ft. per month. Seven machines are used in these headings daily. Two men are required to work each machine; they are driven by compressed air forced in the tunnel by compressors fixed at the mouth of the tunnel; a pressure of 55 lbs. per square inch is required to drive them. The air is conveyed in the tunnel through an 8-inch pipe. The water for drilling purposes is forced through, I believe, a 3-inch pipe. These pipes are laid into a ditch 4 ft. wide by 2 feet deep in the centre of the tunnel.

The central shaft is 1030 feet deep. This shaft was sunk down to the grade of

the tunnel in March, 1871, when they began to drive east and west to meet with the east and west headings, but the work has been greatly delayed by meeting with water in driving, which overpowered their machinery and caused a suspension of work. Since then the contractors have placed a larger lift in the shaft, and the work now progresses without interruption. These headings are driven similar to the west heading, nitro-glycerine being also used here. These headings and also the west heading are driven in the top of the tunnel; the bottom is stoped away afterwards, nitro-glycerine being also used for that purpose. The east heading is driven on the bottom of the tunnel; the roof left to be blasted down afterwards, 8 feet of which is taken down by nitro-glycerine. The holes are bored 5 feet deep by hand labour; the remaining 4 feet is taken down with powder. The holes are drilled by machines fixed on a high movable carriage. The rock is removed by a small locomotive, which also takes the men in and out. On April 21, 1871, four men were killed at this machine carriage by an explosion caused by lightning. The holes were charged with nitro-glycerine and all connected; the connecting wires hung down on either side of the tunnel. The workmen who were near the blast and escaped unhurt say the connecting wires were not on the rails. The lightning was heard to strike the rail about 200 feet from the mouth of the tunnel; lightning was heard to strike the rail about 200 feet from the mouth of the tunnel; the flash was not seen at the carriage, but was plainly seen in the heading. The exploders or caps used were filled with fulminate of mercury. In August of the same year three men were killed in the east heading by an explosion caused by lightning. It is rather remarkable that the top holes exploded and not the bottom ones; the holes were not all connected. The connecting wire of the holes that exploded did not hang down to the bottom of the heading; there was no lightning seen in the tunnel on that day. At the same time there were some premature explosions in the west end of the tunnel, but no lives lost. During both these accidents severe thunderstorms were raging; they both happened about the same time in the afternoon.

The miners at the Hoosac Tunnel receive $2¼ for eight hours work; the labourers $2. The work is carried on night and day, Sundays excepted, and will be completed in due time unless any unforeseen accidents or impediments occur. This tunnel, when completed, will form a direct line from the Western States to Boston, which will be taken advantage of by those great grain-producing States to forward their grain and other products to Boston direct instead of by way of New York, as is done at the present time. The east heading will be holed to the central shaft in a short time, which will be a great advantage to the contractors, as they will be able to bring their rock through to the east end, and also their water, and discontinue all hoisting through the central shaft.

FOREIGN MINING AND METALLURGY.

In the Belgian iron trade prices are still advancing, and the question is being generally rather anxiously asked where the advance will stop. The pressing necessities of trade generally, and the high price of raw materials, justify, perhaps, the present improvement in quotations, but the state of affairs does not appear to be well defined, and long-termed contracts are scarce, whatever may be said to the contrary. The requirements of consumption being extremely urgent, it is not probable that a downward movement will soon be witnessed, but producers and consumers maintain an attitude of reserve, and probably they are right in doing so. The ironfounders have just made a general advance in their quotations. The ironfounders of the Charleroi district contemplate the establishment of a trade association on the model of the Coalowners' Association. The works of MM. Demerbe and Co., at Jemmapes, are about to commence the production of large plates.

At Havre, Chilian copper in bars has made 94*l.* to 96*l.* per ton; refined ditto in ingots, 100*l.* to 104*l.* per ton: Peruvian minerals (pure standard), 100*l.* to 102*l.* per ton; United States (Baltimore), 96*l.* to 100*l.* per ton; ditto Lake Superior, 106*l.* to 114*l.* per ton; old yellow copper, 48*l.* to 54*l.* per ton; red ditto, 86*l.* to 90*l.* per ton. At Paris, Chilian in bars, delivered at Havre, has made 100*l.* per ton; ditto in bars, delivered at Paris, 100*l.* per ton; ditto in ingots, 104*l.* per ton; ditto English, tough cake, 102*l.* per ton; and Corocoro minerals, pure standard, 100*l.* per ton. At Rotterdam, Drontheim has been quoted at 50 fls. to 52 fls.; and Russian Crown, 51 fls. Correspondence from Rotterdam states that the local tin market has been very quiet. Banca is quoted at 93 fls., and Billiton at 89½ fls. Statistics would appear to show that the approaching autumn sale will not be a very heavy one. Thus the unsold stock of the Dutch Society of Commerce amounted at the close of August to 42,988 blocks, as compared with 93,124 blocks at the close of Aug., 1871, 113,793 blocks at the close of August, 1870, 40,789 blocks at the close of August, 1869, and 95,157 blocks at the close of August, 1868. At Paris, Banca tin, delivered at Havre or Paris, has made 161*l.*; Straits, delivered at Havre or Paris, 160*l.*; and English, delivered at Havre or Rouen, 158*l.* per ton. At Paris, French lead, delivered at Paris, has made 21*l.* per ton; ditto Spanish, delivered at Havre, 20*l.* 16s.; ditto English, delivered at Havre, 20*l.* 12s. per ton. Silesian zinc has made 24*l.* per ton; other good marks, delivered at Havre, 23*l.* 16s. per ton.

As regards the French iron trade, it may be observed that numerous orders have come to hand, and the firmness which has been noticed for some time in the trade has developed into an advance as regards most articles. From want of stock there is little doing in rough pig; this article is in great demand. In pig for second fusion business has been done at 7*l.* 12s. and 8*l.* per ton; refining charcoal-made pig is worth 7*l.* 4s. per ton, and mixed ditto, 6*l.* 12s. to 6*l.* 16s. per ton. The iron founders are following the upward movement, and new tariffs have just been issued announcing an advance of 10 or 12 per cent. in all articles. Wrought-iron and axles do not lag behind in the general movement. It would be difficult to obtain merchants' bars at less than 12*l.* 16s. per ton, or finished axles for less than 18*l.* 8s. per ton. In machine iron transactions of some little importance have taken place at 20*l.* per ton. Iron wire, mixed quality, is worth 20*l.* to 20*l.* 16s. per ton; and charcoal-made 17*l.* 12s. to 18*l.* per ton. Iron minerals have experienced an advance in the Haute-Marne. The Donjeux rolling mill in the Haute-Marne, worked by MM. Bonnor and Co., has just been disposed of for 10,520*l.* In the Meurthe-et-Moselle prices have experienced an advance, in consequence of important purchases made for the Creusot works. In connection with these purchases, mention is made of 18,000 to 20,000 tons of pig, to be delivered partly in 1872 at 5*l.* 4s., and partly in 1873 at 4*l.* 16s. per ton. Germany is also stated to have proposed contracts for pig, to be delivered in 1873 at 5*l.* per ton. The Paris market has been well supported, great firmness having prevailed for all articles. First-class coke-made iron is worth currently 12*l.* to 12*l.* 8s. per ton. As regards plates, prices range between 17*l.* and 17*l.* 4s. per ton for large descriptions. Creusot has carried its rates for plates to 17*l.* 4s., and 17*l.* 12s. per ton at the works.

The Belgian coal trade maintains the high rates which have been current for some time past, but as regards production the aspect of affairs is not satisfactory from a consumer's point of view, especially now that winter is approaching. The supplies of the sugar-works are becoming scantier and scantier. Attempts are made by firms and companies connected with other countries—and especially English firms and companies—to obtain coal in Belgium; these attempts will form a conspicuous item in the industrial history of Belgium for 1872. Very high prices are applied by all the coalowners, and are accepted by purchasers; the latter are even willing to enter into arrangements for several months' supplies at current quotations, but no coalowners will assent to such arrangements, as they anticipate higher rates, while contracts in course of execution absorb almost all their production. The disposeable stock of coal in Belgium is almost *nil*, and the want of labour which is experienced does not allow it to be re-constituted. Quite a dearth of coal is anticipated in Belgium in the winter months. Deliveries by railway are being actively carried on, and there are no complaints at present as to any want of rolling stock. Coke can scarcely be obtained at all in the Liége basin. Tenders were recently invited for coal for the Belgian State Railways, the firms tendering stipulated for 16s. per ton, an advance of about 3s. per ton upon the the prices of similar contracts let for the same system Aug. 14.

In France, as in Belgium and England, the upward tendency in coal quotations seems to gather strength and force every day. Numerous and pressing orders come to hand, and it is very difficult to provide for them, the production being almost entirely sold before hand, while the want of labour which is experienced renders the extraction chronically insufficient. In this latter respect a slight improvement is, however, reported in the French basins. It is especially in the West and the North-West of France that the scarcity of coal makes itself felt. This part of France is a tributary of England for coal, and in the state of affairs which now prevails it is of much less use than hitherto to have recourse to a country which is itself endeavouring to obtain supplies on the Continent. In the Loir district rather numerous complaints have arisen with respect to the distinction made between foreign and French clients. Since the coal difficulty commenced a rather considerable number of orders for coal have been received in the Loire basin from Italy for the supply of gasworks, &c. Anxious to meet the convenience of these new clients whom they might probably retain—thanks to the Mont Cenis Tunnel—in spite of English competition the Loire coalowners have reserved their best coal for their Italian friends, and have sent only secondary qualities to their old customers in France.

FOREIGN MINES.

EMMA.—Telegram, New York: "Shipped 130 tons per Calabria."

— Telegram from Salt Lake City, dated 9th inst.: "Forwarded no ore this week to New York; raised 310 tons first-class ore this week; raised no second-class ore this week; 440 tons first class ore at railway; 150 tons raised ore at mine; sold 220 tons here."

NERBUDDA (Coal and Iron).—Under date Aug. 15 the directors have received advices from India announcing that their manager, Mr. Charles Maynard, has been attacked by fever, and unable to forward his official letters. Mr. Maynard, however, notifies that he has proved the Nos. 3 and 4 seams to the north of the 16 ft. dyke in No. 2 level, off new engine incline, hitherto unproved.

DON PEDRO NORTH DEL REY.—Telegram from Lisbon: Remittance 9972 oits.; produce for July, 4640 oits.; weighed to August 18, 1645 oits.

SAN PEDRO.—R. M. Kitto, July 16: At the new shaft, in the 135 fathom level, the shaftmen are still engaged about the penthouse and securing the shaft, after which we shall take out the tramroad from the 110 fm. level and put it in at the 135 fm. level; this will greatly facilitate the working in the bottom of the mine.—New End: The 135 fm. level north, 58° east, will produce 2 tons of 40 per cent. ore per fathom.—North part of Manto: The 135 fm. level, new end, is in a branch of yellow ore; this end is distant from shaft 12 fms. 0 ft. 3 in., bearing south 12° west, and is producing good stones of ore.—West part of Manto: The 135 fm. level, driving on the edge of Manto, in a north-west direction, is greatly improved since my last, and will now produce 4 tons of 40 per cent. ore per fathom. The ore does not reach more than about 3 ft. high from the bottom; it is 6 ft. wide, and will produce for that width 12 tons of 40 per cent. ore per fathom.—West part of Manto: The 135 fm. level, driving south, will produce 8 tons of 35 per cent. ore per fathom; this has improved since my last from 1 ton to 8 tons. This level is being driven as a cross-cut. We have already driven 10 ft. through the course of ore, and will give for this width 20 tons of 35 per cent. ore per fathom. This is one of the best discoveries ever made in San Pedro Mine. There is plenty of water issuing from the lode, which leads me to think there is a great width of Manto standing in this direction; this ground will require draining before sinking shaft. A chiflon sinking on the north part of Manto, in the bottom of the 122, will produce 2 tons of 25 per cent. ore per fathom. A tribute pitch in the back of the 122, south of the shaft, at one-half tribute, will produce 2 tons of 40 per cent. ore per fathom. A cross-cut driving at the 88, to cut the western branches, will take about four months to accomplish. A tribute pitch in the bottom of the 30, at one-half tribute, will produce 3 tons of 20 per cent. ore per fathom. The pitch in back of the adit is suspended for the present, as well as the chiflon sinking from surface, on the new lode, on account of being short of workpeople. The new mode of working without timber is answering admirably, and find it inexpensive. We are still filling up the old works, which is the only sure mode of keeping the mine safe.—Santa Elena Mine: We have communicated the chiflon with the shaft, and are now sinking below this point another chiflon, or winze, on the course of the lode, or manto; this is producing good stones of ore.—San Antonio Mine: A shaft sinking from surface by one man; as soon as we get people will put four men in this shaft, and sink it below the old workings.—Cuba Mine: We have not yet resumed working here. In conclusion, I beg to say I never saw mines looking more promising to prove lasting and profitable than these.—P.S. I have sent you a box of specimens taken from the different levels in the above report.

— R. M. Kitto, Aug. 2: New Shaft, 135 Fathom Level: We have secured the shaft, put in pent-house, taken out tramroad from the 110 fathom level, and put the same in the 135 fm. level. Everything is in readiness for sinking, which we shall begin as soon as possible.—New End: The 135 fm. level driving north, 58° east, will produce 2 tons of 40 per cent. per fathom. The north part of Manto, at the 135 fm. level new end driving south 12° west, will produce good stones of yellow ore. The west part of Mento, at the 135 fm. level driving on the edge of Manto in a north west direction, will produce 6 tons of 40 per cent. ore per fathom. The 135 driving south will produce 6 tons of 35 per cent. per fathom; this end is still letting out water freely. A new end, driving east from the side of the last-named level, will produce 6 tons of 35 per cent. per fathom. The Chiflon sunk on the north part of Manto, at the 122 fm. level, is communicated with the 128 fm. level. A tribute pitch in the back of the 122, south of new shaft, at ½ tribute, will produce 2 tons of 40 per cent. ore per fathom. The cross-cut at the 88 is suspended at present, as well as the pitch in the bottom of the 30, on account of being short of workmen. We are still filling up and securing the old works.—Santa Elena Mine: The Chiflon sinking on the course of the Manto is producing good stones of ore.—San Antonio Mine: In a shaft sinking from surface the ground is favourable.—Cuba Mine: We have not yet resumed working here. I am glad to say the mines are looking splendid, and in good working order.

SIERRA BUTTES.—Result of the clean-up for the month of August —Receipts $34,839; 3431 tons of ore were crushed during the month; cost of mining and milling same, at $4·44 per ton, $15,233·64.

CAMP FLOYD.—Capt. Shaw, Sept. 9: "Have worked July and August 930 tons, yielding $41,475 ($29s.); will run on better ore this month."

CEDAR CREEK.—Telegram from the superintendent, F. W. Ludluw, Sept. 12: "August profit $1600."

BIRDSEYE CREEK (Telegram).—G. S. Powers, Sept. 21: "We have cleared up Uncle Sam claim after a run of 32 days. The profit is $1750.

G. S. Powers, Aug. 16.—In my last I forgot to mention that I had placed the balance for July in the bank to the credit of Birdseye Company. I have got machinery for hoisting running nicely, and I am in hopes to keep the work going on now in the shaft until I can get my pump attached. The water is coming in pretty freely, so fast that it will take some time longer to sink to grade than I at first thought, but I am driving it as fast as I possibly can under all the circumstances. I expect to get my pump working in four or five days. On the tunnel there is not much change in the rock, and the contractors are doing all that men can do considering the size of the tunnel and the large amount of rock to be moved. I now expect to get water from St. Ejuba Canal Company till October 10, then they will turn out to repair their flumes for a few weeks, after which, if they have any water left, we can get it, but there is nothing definite about it further than the 10th October.

SWEETLAND CREEK.—G. D. McLean, Aug. 17: The wheel and pump are approaching completion. We are driving on both faces from the shaft, and from the lower end, with good rock in all. New tuunel is 1280 feet at lower face, and 30 feet each way from the shaft. Everything now looks favourable for a speedy completion of the tunnel, but handsome profits cannot be looked for until the new tunnel is completed, the sluices and blocks in, the shaft raised, and the cuts run; this will yet require considerable time and expense, still our progress is rapid.

ALMADA AND TIRITO.—The directors have to advise the receipt, per Tasmania, of a parcel of concentrated black ores, nearly 27 tons, value about 60*l.* per ton. The Knight Templar, with 50 tons of similar ore, has also arrived at Liverpool, and is unloading.

JAVALI (Nicaragua).—The directors have advices dated Aug. 5. The mill has crushed 875 tons of quartz, yielding 301¼ ozs. of gold, valued at 750*l.*

MALPASO GOLD WASHING.—C. R. Clarke, July 28: I now have the machine at work, and it is doing "bully." I have to wash away a large quantity of debris that was deposited by the Spaniards, so that I cannot count on more than half the time as washing new dirt; but as I wash into the hill the new dirt will increase, and I think the returns will increase in proportion. The gravel I am now washing prospects splendid, and is increasing in bulk every yard I advance into the hill.

CHONTALES.—Sept. 12: The mail has arrived, and I regret to say the result of the month's working shows a loss of over 500*l.* Gold returned for July 140 ozs. from 1160 tons of ore, average produce 2½ dwts. per ton; value, 394*l.* 10s.; cost for the month, 901*l.*, which includes 131*l.* 7s. expended for freight and erection of new stamps. These are now completed, and Mr. Belt has 24 good and efficient stamps at work. I expected to crush 2000 tons of ore during August month. Labour is now abundant, and the health of the establishment good, but operations in the mines have been retarded during July through continuous heavy rains.

— Aug. 5: Report for July month: San Antonio Mine: A stope in back of No. 6 level has been stoped 23¾ varas; lode 3 feet wide, worth 3 dwts. of gold per ton.—East San Benito Mine: No. 1 stope in back of No. 2 level, west of cross-cut, has been stoped 44 varas; lode 4 feet wide, worth 3 dwts. of gold per ton. No. 2 stope in back of the same level, east of cross-cut, has been stoped 71 varas; lode 3 ft. wide, worth 2 dwts. of gold per ton. A stope in back of No. 1 level has been stoped 57¼ varas; lode 3 feet wide, worth 2 dwts. of gold per ton.—Santo Domingo Mine: We have driven the level east on the course of the lode 18 varas; lode 6 feet wide, worth 4 dwts. of gold per ton. We are now in a good position for extensively working this mine, as we have laid down a new tramway 144 varas in length, connecting it with the main road from East San Benito Mine to the stamps, and also put up a rise from the deep level to take the quartz from the upper levels. The ore sent to the stamps from this mine is from the old heap, and poor. During the month we have had very heavy rains, which have effected the ventilation throughout the mines, almost stopping the working of the San Antonio Mine. The number of tons sent to the stamps is as follows:—From San Antonia Mine, 86 tons, yielding 3 dwts. of gold per ton; from East San Benito Mine, 986 tons yielding 2½ dwts. of gold per ton; from Santo Domingo Mine, 88 tons yielding 2 dwts. of gold per ton; in all 1160 tons, yielding 140·9 ozs. of gold.—JOHN TONKIN, DANIEL TONKIN.

BATTLE MOUNTAIN.—Capt. Richards, Aug. 15: The 113 ft. level being driven north has greatly improved, both in quantity and quality of the ore. This being the deepest level driven so far north, an improvement in it may be looked forward to with greater expectations. Pierce's stope, in back of the 113 ft. level, has also improved in appearance, and the yield of the ore has increased. The 73 ft. level north produces no ore, but is being pushed forward owing to its promising character. Jack's stope, in back of the 73 ft. level, still yields some good ore, but the quantity has decreased. A stope is being opened north of Jack's, which produces a little good ore. Henwood's stope, in back of the 37 ft. level, has for the present been suspended, but will shortly be resumed. We shall recommence sinking Bishop's winze in bottom of the 188 ft. level cross-cut next week.—Lake Superior: Our force has so much increased that we are enabled to resume the sinking of the winze in the bottom of the 135 ft. level. This may be known as Richards's winze. It produces no copper at present, but should be sunk, as it has a promising appearance. The water-pipes have been laid, and the water is now flowing into the mines. There were 3522 sacks shipped at San Francisco, and 1142 at the depôt, of which 679 were raised during the previous fortnight.

LUSITANIAN.—Sept. 3: Palhal: Taylor's engine-shaft has reached the 160, and we shall at once commence to drive. The lode has not been taken down since the date of our last report, but it may be assumed to be still worth 4 tons of ore per fathom. In River shaft, sinking below the 120, the lode is 6 ft. wide, composed of loose quartz and country.—Levels on Basto's Lode: In the 150, east of Taylor's, the lode is 4 ft. wide, yielding ¾ ton per fm., and west of Taylor's from 11 to 12 ft. wide, with a branch of ore worth 1½ ton per fathom. The 140 and 130, east of Taylor's, are being extended in a lode from 6 to 7 ft. wide, of quartz. In the 120, east of River shaft, the lode is 4 ft. wide, of quartz and flookan. In the 110 east the lode is 2½ ft. wide, yielding stones of ore; and in the 90 east it is of the same size, but of no value. In the 80, east of winze No. 89, the lode is 4 feet wide, yielding a little ore; and in the same level west the lode is 1 ft. wide, composed entirely of quartz. The lode in the 70 east is now worth ½ ton per fathom. The branch in the 38, west of the slide lode, is 6 in. wide, composed of quartz. The Mill lode in the 18, east of Taylor's is 4 in. wide, composed of schist and quartz.—Slide Lode: In the 140, south-west of Taylor's, the lode is 8 in. wide, composed of flookan; and in each end of the 130 the lode is 1 ft. wide, of precisely the same character. The adit cross-cut south of the branch west of Perez' shaft is in hard ground.—Cross-cuts: In the 60, north of incline shaft, the ground is a little easier, and the quartz giving out twice the quantity of water that it has been. In the 60 south the ground is without alteration, and is now dry.—Levels on Great Lode: In the 10 east of incline shaft, the lode is 2½ ft. wide, composed of loose crystallised quartz and blende, of which latter it produces ½ ton per fathom. In the 50 east the lode is 1 ft. wide—unproductive. In the 50 west the lode is 1½ ft. wide, yielding a little mundic. The 40 east is unproductive. The 40 west has a lode 2½ ft. wide, composed of quartz, spotted with lead and mundic. The 30 east is of no value, and in the 20 east the lode is split into small branches, also valueless. The adit is being continued west of incline shaft on the flookan lode, which is 1 ft. wide; this end is letting out an increased quantity of water, which leads us to hope that we are nearing the caunter part of the lode.—Levels on Caunter Lode: In the 10 the lode is from 6 to 8 in. wide, containing spots of lead. In the 20 west the lode is 1 ft. wide, composed of quartz and spots of lead ore, but of no value. The 30 west is poor, and the men have been removed to stope.

PONTGIBAUD.—W. H. Rickard, Sept. 2: Roure Mine: The cross-cut east of Richard's shaft, at the 100 metre level, is being driven rapidly in favourable ground towards the new shaft. The 60 cross-cut, towards the same point, also progresses satisfactorily. The 80, south of Agnes' shaft, is in soft unproductive ground. The same level north of cross-cut yields stones of ore in dark quartz.—Virginie's Lode: The 62 metre level north yields ¾ ton of ore per current metre, and the same level south yields ore-stuff of low quality. The 40 metre level north yields ½ ton of ore per metre. The 20 metre level north yields ore-stuff of low quality. The winze behind this end yields ¾ ton per metre. The rise in the 20 south is unproductive. The adit south has opened a piece of good ground, worth ½ ton per metre, but the present end is unproductive. The same level north yields ¾ ton of ore per metre. The mill adit level continues to produce pretty well, worth ½ ton of ore per current metre.—La Grange: Our tribute pitches in this mine continue about the same in yield as last month.—Mioche: The sinking of the shaft below the adit is rather slow, there having been an increase of water during the month. The adit north, on the eastern part of the lode, is unproductive.

La Brousse: The sinking of Basset's shaft has gone on pretty regularly throughout the month. The 120 south has entered softer ground; the lode yields a little coarse saving work. The same level on the western part of the lode is poor. The 100 south yields ½ ton of ore per metre; the rise just behind this end opens out good tribute ground. The 80 is in a large, strong, orey lode, yielding average quality stuff. The 60 south is of no value; the lode where being undercut behind this end is 15 ft. wide, worth 2 tons of ore per metre.—Pranal: The sinking of St. George's shaft below the 50 goes on well. We have at this time a lode in the shaft worth ½ ton of ore per metre. The 70 south on St. Matthew's lode yields ½ ton of ore per metre, and the same level north ½ ton. The 70 on the eastern part yields also ½ ton per metre.—Surface: Our workpeople throughout the mines have returned from the harvest, so that we are again pretty full handed. Our samplings have amounted to 280 tons.—St. Amant: The cutting of the plat and reservoir in the 25 at Susan's shaft is nearly completed, and we hope soon to set the sinking below that level. The 25 north continues to yield stones of ore in carbonate of lime. The same level south is valueless.—Giroux: We have obtained permission and have commenced to drive an adit level to cut through some kindly ground, containing several lodes, which work will be pushed on with all speed.

WEST CANADA.—Aug. 22: The stope in the bottom of the 40, east of Rowe's shaft, will yield 3 tons of ore per fathom. In Bray's shaft, sinking below the 60, there is an increase of water, and the lode is yielding 2 tons per fathom. In the bottom of the 60, east of this shaft, the stope yields 2½ tons per fathom. West of Palmer's, in the bottom of the 50, the stope produces 2½ tons, and in the bottom of the 35 fm. level 3 tons per fathom. There are two stopes under the 35, east of Bray's shaft, yielding 2½ and 3 tons per fathom, and one west of shaft, on Fire lode, worth 2 tons per fathom. The stope in the bottom of the 20, east of the new engine-shaft, will give 2½ tons por fathom.

[For remainder of Foreign Mines see to-day's Journal.]

COLORADO MINING ITEMS.

Denver Aug. 14.—The *News* says it is essentially correct that the diamonds and other precious stones, now creating such an excitement in San Francisco, did actually pass through Denver, *en route* from the South, and parties in San Francisco are telegraphing and writing to citizens here making enquiries as to the best route to reach the new discoveries. So much we know to be true. As to the diamond fields, as they are called, we have no knowledge of their extent or richness, or how much they amount to. Their probable location, however, is in the extreme south-western corner of Colorado, or north-eastern Arizona; doubtless not far from the ruins of ancient cities found in that locality. These cities may have been Spanish towns, built for the purpose of working mines in that vicinity. Such being the case, the best and nearest point from which to reach them is Denver, thence south over the Denver and Rio Grande road to Pueblo, thence over the Langre de Christe Pass, into the Rio Grande country, and thence south-west, through Aminas City, to the diamond field, so called. Another fact long known is that in the south-western mines of this territory are found numerous rubies, and the further one proceeds in that locality the more plentiful they become. Whatever this fact may indicate it is worthy of note; but it is certain that if these alleged discoveries are anywhere in the vicinity named, this city is the nearest point to them, and the best from which to set out.

Georgetown, Aug. 22.—The Arey Crushing and Sampling Works since June 19 has crushed and sampled 483,647 lbs. of ore, the average coin value of which was $200 per ton (of 2000 lbs.), or about $50,000. Last week they shipped to Chicago and Germany 873 sacks of ore, weighing 42 tons; they shipped 2¾ tons in one day. This may serve to give some idea of what our mines are doing, and we have three or four other crushing-mills, all as busy as they can be. The result of the last four days' working at Stewart's Amalgamating Mill is four bars, of the coin value of $3285 (rather below his usual average); this will show for the year a return of $246,375, and all from second-class ore.

Central City, Aug. 21.—Fagan and Sparks will commence work on the Sparis lode, Nevada Gulch, on Monday; this mine is owned by English parties, and has been standing idle for some time. Mr. Bela Buell is taking out of the Levitt Mine 40 tons of mill ore per day, on which he is keeping 55 stamps running steadily. He is also taking out a large and fine quality of smelting ore. The Pippin Brothers are working Mead's property, on Gunnell lode, at a depth of 170 feet, and are taking out ore which yields 8 ozs. to the cord. Cooper and Co., at their gulch claim, South Clear Creek, are taking out $10 per day to the man. Their shaft is 45 feet deep, and they have a drift 45 feet in length, which they are running on good pay dirt. The placer claims in Russel are panning out handsomely. William Queen's claim last week yielded at the rate of 2½ ozs. to the man.

ENGLISH AND AUSTRALIAN COPPER COMPANY.—In the Supplement to last week's Journal we briefly alluded to the impetus given to the copper mining interest of the colony by the English and Australian Smelting Company's works at New Lambton being opened. We have since received particulars of the various works completed and in hand preparatory to active operations being commenced in an industry that cannot fail to be of great importance to the district. The local *Newcastle Chronicle* says—"The advantages we possess in the abundance of cheap coals obtainable on the spot for the reduction of metallic ores to the pure metal, or for other manufactures, are immense, and doubtless before long will become extensively availed of. The English and Australian Copper Company, at an expense of several thousand pounds, have erected here five furnaces, each capable of reducing from 50 to 60 tons of ore per week; one double-chambered calciner, built on the most modern and approved plan, which, on a pinch, can turn out 7 tons of ore ready for the reducers every eight hours, or equal in all to 130 tons per week; and one refining-furnace, capable of turning out about 50 tons of fine copper per week. All these furnaces communicate by a main culvert with a splendid chimney stack, some 130 ft. high, 14 ft. square at the base, and 6 ft. square at the top, and by which all the smoke, sulphur, and other deleterious gases are conveyed into the atmosphere, besides creating a powerful draft to the furnaces. Precisely at 2 o'clock on Tuesday the party who had been rambling over the works, apparently examining them with great interest, assembled in front of the two furnaces nearest the stack at the south end of the shed. We noticed, in company with the manager and the mayor, Messrs. C. Sweetland, manager of the Commercial Bank; G. Hewison, J.P.; J. Dibbs; J. Daniel, town clerk; J. John Page, storekeeper, of Waratah; Lewis Thomas, foreman of the works, Moore, and Malephant, who, with the rest of the employees of the company, were also present, and several other gentlemen. Mr. Lawrence explained that Mr. John Mackenzie, Government Inspector of Coal Fields, and a few other gentlemen who had been invited, had sent apologies for their unavoidable absence, and then, addressing his worship the mayor, on the part of the English and Australian Copper Smelting Company, said—'I beg to request you to light up the first fire for active operations.' His worship then, with matchbox in hand, took his stand in front of the mouth of the right-hand furnace, in which the materials for the fire had been already laid ready for lighting, and said—'Mr. Lawrence and Gentlemen: I assure you that it gives me a very great deal of pleasure to be present on this occasion, and to witness the large and extensive works that have been erected hereabout, now to be put into active operations. I fully appreciate the honour you do me in asking me take the chief part in such an interesting and important work. I have often looked towards this tall chimney with feelings of sorrow at seeing no sign of life or business about it, and much have I wondered if it were ever going to commence to smoke. In a few minutes, gentlemen, it will be a fact. The silence that has so long reigned over it will be broken, and shortly, I am told, from 40 to 50 men will be employed at their several occupations, creating wealth out of the crude ores of the earth. It will be a great satisfaction to us in this neighbourhood, and I am sure, with me, you will all wish success to the company who have laid out so much money in erecting such excellent works. Gentlemen, the silence that has hovered over this place for such a length of time is about to be broken by the striking of a match. With that match I will light the fire, and I hope that it will not be put out until it has been of great profit to the company and a great blessing to this neighbourhood, by providing large and constant means of employment.'"

EAST SHEBOYGAN.—Ore of a very high grade has been struck in the south-west drift, and the indications are favourable that it will develope into a large body. Good ore continues to be extracted from the Exchange and Regent drifts.—*Mining and Scientific Press* (San Francisco), Aug. 17.

NEW WHEAL CHARLOTTE.—The following is a special report by Capt. John Tonkin:—In the 10, east of Evan's shaft, the lode is 2 feet wide, producing some good stones of tin, and showing indications of an improvement. In the 40, east of engine-shaft, the lode is 4 ft. wide, producing a little tin, and as it is approaching a run of tin ground gone down below the 20, a few fathoms before this end, we expect the lode here also to improve by driving east. In the 40, west of engine-shaft, the lode is 3 ft. wide, producing saving work for tin. In the 30, east of cross-cut, on north tin lode, the lode is 1½ ft. wide, worth about 3*l.* per fathom, but now disordered by the slide. We have a course of tin gone down in the bottom of this level, about 7 fathoms in length, worth 20*l.* per fathom, which we shall be able to work in about four months from this time, when we expect the new shaft will be holed to this level. As the slide has disordered the lode in the back of this level we expect the lode, when cut at the 10 and 20 over the slide, will be equally good. We expect to put the flat-rods to work in about a week from this time, and in about two months to sink the new shaft to the 10 fm. level, where we hope to cut the course of tin by cross-cutting south about 5 fathoms in a fortnight afterwards. This part of the mine holds out very bright prospects of your being speedily remunerated for the outlay already incurred, and for the further capital required to develope the mine. I earnestly advise you to explore this part of the mine, as I believe only a small capital will be required to insure success.

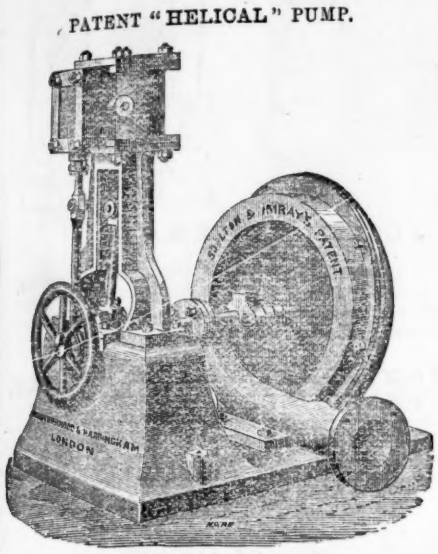
BROTHERHOOD AND HARDINGHAM,

LATE KITTLE AND BROTHERHOOD, AND FORMERLY WILLIAM FOX,

ESTABLISHED 1824.

ENGINEERSAND MILLWRIGHTS,

PATENT "HELICAL" PUMP.

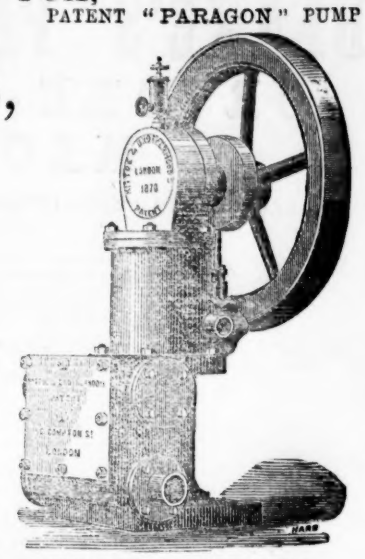


THE BEST ROTARY PUMP.

Kittoe and Brotherhood's Patent "PARAGON" STEAM PUMPS (Sole Manufacturers).
Boulton and Imray's Patent "HELICAL" PUMPS (Sole Manufacturers).
Brotherhood's Patent "GYROSCOPIC" STEAM GOVERNORS (Sole Manufacturers).
Kittoe and Brotherhood's Patent REFRIGERATORS for Brewers' purposes (Sole Manufacturers).
Kittoe and Brotherhood's Patent PUMP VALVES (Sole Manufacturers).
Kittoe and Brotherhood's Patent HYDRAULIC PIPE JOINTS (Sole Manufacturers).
Admiral Inglefield's Patent HYDROSTATIC STEERING APPARATUS (Sole Manufacturers).
IMPROVED GAS EXHAUSTERS.
SCREW-PILE DRIVING MACHINES.
IMPROVED GAS BOILERS.

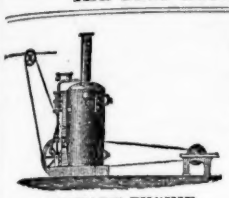
Pumping Machinery of all kinds.
56 and 53, COMPTON STREET, GOSWELL ROAD, LONDON, E.C.

PATENT "PARAGON" PUMP



THE BEST DONKEY PUMP.

CHAPLIN'S PATENT STEAM ENGINES & BOILERS



STATIONARY ENGINE

(PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862),

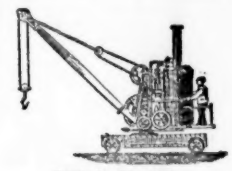
The ORIGINAL combined Vertical Engines and Boilers, introduced by Mr. CHAPLIN in 1855. Each class kept in Stock for Sale or Hire.

WIMSHURST, HOLLICK, & CO., ENGINEERS,

WORKS: REGENT'S PLACE, COMMERCIAL ROAD EAST, LONDON, E.

(At Regent's Canal, near Stepney Station).

CITY OFFICE: 117, CANNON STREET, LONDON, E.C.



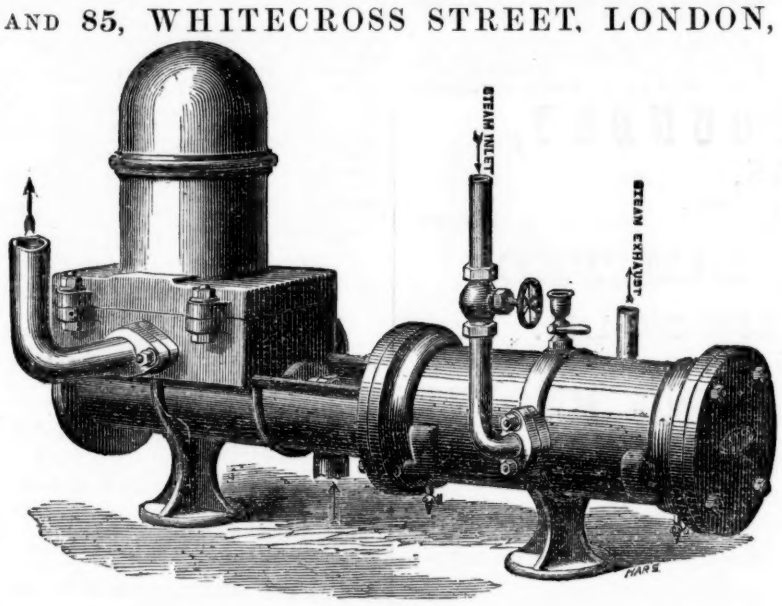
STEAM CRANE.

THE PATENT "UNIVERSAL" STEAM PUMP,

SOLE MAKERS,

HAYWARD TYLER AND CO.,

84 AND 85, WHITECROSS STREET, LONDON, E.C.



TESTIMONIALS.

Tottenham Local Board of Health, Tottenham, 12th December, 1870.

GENTLEMEN,—I have much pleasure in informing you that your Steam Pump proved itself to be one of the most useful machines for raising water that I have ever seen. It was driven night and day for nearly three months without a single hitch. The construction of the pump is so simple that any person can be taught to open it, and replace or clear the valves. I have seen no engine at all to be compared with it for mines, coal pits, or small water-works.

I am, Gentleman, faithfully yours, (Signed) P. P. MARSHALL, C.E., Surveyor.

Messrs. HAYWARD TYLER and Co., London.

Aston Main Coal Company, near Sheffield, 1st December, 1871.

To Messrs. HAYWARD TYLER and Co., 84, Upper Whitecross-street, London.

GENTLEMEN,—In answer to your enquiry, I beg to state that the two "Universal" Pumps supplied to us (through your agent, Mr. T. A. Ashton) are doing our work exceedingly well; we think they are the best in the market, and shall be glad if you will send us another 9-in. cylinder 6-in. pump, one week from this date.

Yours truly, (Signed) ASTON MAIN COAL COMPANY.

Extract of a Letter from JOHN SIMPSON, Esq., to Hayward Tyler and Co.'s Agent.

Rhos Llantwitt Colliery, Cuerphilly, near Cardiff, March 4, 1872.

I should like to have the water-piston and clacks the same as in our present pump, as they work exceedingly well, and I do not think it is possible to improve upon the present pump, except by lining the cylinder with brass es ordered. (Signed) JOHN SIMPSON.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

STANLEY'S PATENT FURNACE,

FOR SMELTING ORE OR RE-MELTING IRON OR OTHER METAL,

PUDDLING AND ALL KINDS OF HEATING FURNACES.

JOHN MARTIN STANLEY, PATENTEE & SOLE LICENSOR, SHEFFIELD.

The advantages of these furnaces are, in the first place, they effect a saving of from 25 to 50 per cent. in fuel.
2ndly, The use and expense of grate-bars are dispensed with, as these furnaces have closed fire-places, formed in brickwork.
3rdly, They make from 80 to 90 per cent. less ashes than open fire-grate furnaces.
4thly, They have a purer flame, the combustion is more complete, and contains less free or unmixed air or gases.
5thly. The workmen have much less labour in working these furnaces.
6thly, They heat quicker, and are more under the control of the furnace-men.
7thly, They are not affected by the position of the wind or draughts.
8thly, The mills and workshops are cooler and more comfortable than where the open fire-grate furnaces are used.

For prices, and other information, apply to J. M. STANLEY, 27, Change-alley, Sheffield,

---

IMPROVED APPLICATION OF WATER POWER.

THE TURBINE.

Mac Adam, Brothers, & Co.,

ENGINEERS,

SOHO FOUNDRY, BELFAST,

After twenty years of experience, have brought their Improved TURBINE to great perfection.

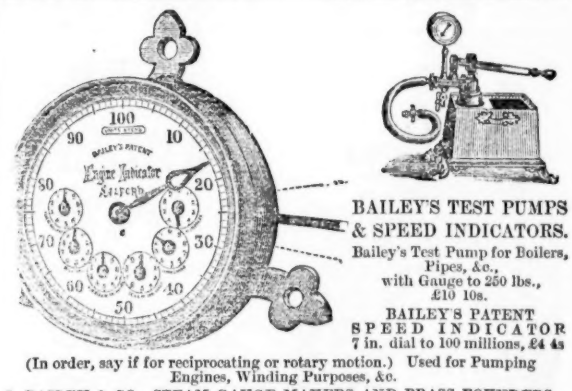
It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.

On low falls it has the great advantage of not being impeded by floods or back-water.

It is particularly well adapted for situations where the quantity of water is *variable*, and where all other wheels fail.

Its motion is extremely regular, and, when desired, a Governor can be applied effectively.

This Wheel is at work in a great many places, to which reference will be given.



BAILEY'S TEST PUMPS & SPEED INDICATORS.

Bailey's Test Pump for Boilers, Pipes, &c., with Gauge to 250 lbs., £10 10s.

BAILEY'S PATENT SPEED INDICATOR 7 in. dial to 100 millions, £4 4s

(In order, say if for reciprocating or rotary motion.) Used for Pumping Engines, Winding Purposes, &c.

J. BAILEY & CO., STEAM GAUGE MAKERS AND BRASS FOUNDERS, ALBION WORKS, SALFORD, LANCASHIRE.

PROTECTION FROM FIRE!

TRADE MARK

SECURITY

Bryant & May's PATENT SAFETY MATCHES

LIGHT ONLY ON THE BOX!

HEPBURNS'

PUMP LEATHER

WATERPROOF

By a special method of preparation, this leather is made solid, perfectly close in texture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of—

I. AND T. HEPBURN AND SONS,

TANNERS AND CURRIERS, LEATHER MILLBANDAND HOSE PIPE MANUFACTURERS,

LONG LANE, SOUTHWARK, LONDON.

Prize Medals, 1851, 1855, 1862, for MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 26, FLEET STREET, E.C., where all communications are requested to be addressed.—*Sept.* 14, 1872.

SUPPLEMENT.

THE MINING JOURNAL,

Railway and Commercial Gazette.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

EXTRACTS FROM DICKER'S "AUSTRALIAN & LONDON GAZETTE."

LONDON, SATURDAY, SEPTEMBER 7, 1872.

GOLD AND THE GOLD-FIELDS.

OPERATIONS on the gold mines of this colony have been carried on steadily during the past month, and in most parts with satisfactory results. The Great Extended Hustler's Tribute Company's mine had been the most remarkable and profitable one ever found in the colony. Taking into consideration the short time which the reef had been struck in it, about eight months, the mine had yielded considerably over 1000 oz. of gold every week, and in some weeks the yields ranged from 1500 oz. to 2000 oz. The yields, however, fell off considerably during the past month, the amount for the fortnight ending June 29 being only 1582 oz., and this led to a decline in the value of the shares of about 30 per cent. It is thought, however, that when the next lower level is opened out and stone got from it, the returns may, perhaps, be as great as ever. The fall in the Great Extended Hustler's Company's shares was not nearly so heavy as that of the Tribute, and they are already looking up again. On Friday last, some good transactions occurred in the company's shares, and sales were made as high as 17*l.* 16*s.*, which was within 10 per cent. of the highest value they had previously reached. The Sandhurst correspondent of *The Argus* writes as follows of the prospects of the company and the tribute company:—"The cause of the improved movement in the company's shares is principally on account of the nature of the stone being broken down in the 450-feet level, and also the great improvement that has taken place in the immense reef, 70 feet wide on their northern boundary, adjoining Latham and Watson's. Work has for some months been suspended at this (500 feet) level on the north, but men have been put on again this week, and the reef, which dips rapidly north, shows stone that is calculated to yield from 1 oz. to 2 oz. per ton at least, for a width of 70 feet. In the 450-feet level, driving south on the western leg, they are breaking down rich stone, gold being visible in regular seams for some distance. Whilst I was below on the afternoon of Friday last, I was shown very rich stone from the old reef, and a quantity of the gold being heavy, almost without quartz, and that from the new reef is showing coarse gold all through the solid stone. The mine is at present promising better prospects than ever, for, in addition to the enormous amount of stone that is now open in all parts of the different levels, they are sinking through the reef recently cut in the southern shaft, being the same run worked in No. 1 Tribute. They are down 30 feet through the stone, which shows splendidly with gold, which the manager describes by the term gravelly, it being coarse and thoroughly well distributed wherever the stone has been broken. The machinery for this shaft is being rapidly proceeded with, and when completed, it will enable them to send some fine returns from this run, independently of all others, the 12 extra head of stampers being also in the course of erection. The tribute company have been raising their usually rich stone throughout the week, and a fine cake will be retorted to-morrow."

The reports from all other parts of the colony are very satisfactory, and the amount of gold being obtained in the whole colony, so far as can be estimated, appears to be well kept up. A vast amount of prospecting is being carried on at Sandhurst, which must in many instances be attended with prosperous results. The calls for the first six months of the present year amounted to 231,442*l.* 9*s.* 4*d.*, and the dividends to 282,778*l.* 1*s.*; leaving 51,335*l.* 11*s.* 8*d.* in favour of the latter. The yields for same period were 166,426 oz. 10 dwt. 1 gr., of the value of 656,584*l.* 18*s.* It will be noticed by the above figures that the calls have exceeded the same period of last year by 157,402*l.* 15*s.* 2*d.*, which will give an idea of the great increase that has taken place this year in the working and prospecting of the mines of the district, and also in the erection of machinery, which has increased to a very great extent.

In the Castlemaine district there are numbers of mines which have been worked in past time with good results, and mining prospects throughout the district are brightening considerably. The discovery of the lost lead of gold in the Ajax Company's mine recently was a most important item of news, and if the quality of the stone realizes as well as the prospects give promise, it is beyond any further doubt that in the Castlemaine district as well as the Sandhurst, the second making of stone below the water level will have been proved to be as rich as the stone taken out to that level. There have been enormous yields of gold in many of the Castlemaine reefs from the surface down to 70 ft. to 100 ft., and in no previous instance has the shot of gold been followed to ascertain if it persists below that level in carrying gold as rich as it did above it.

At Pleasant Creek and Clunes, which are, after Sandhurst, the best auriferous quartz fields, the yields of gold continue good, and it is expected that they will soon be increased by the success of prospectors at work on new mines in both those places.

The alluvial country around Dunolly has been famous for returning some of the largest nuggets ever found in the world; and on Friday last a man named Davey was rewarded by the discovery of a splendid lump of gold. He was working at Wilson's lead, about three miles from Dunolly, when he found the welcome stranger, which weighed 538 oz.

The Steiglitz and Ballan and other mines in that locality appear to be doing as well as any of our quartz claims, but the majority of the reefs are rather small; some of these, however, are rich enough to repay handsomely, if the country be not too hard, for the trouble of taking them out. A fine cake of gold of 200 oz. was shown recently from the claim of the Native Youth, a private party. Away to the eastward of Steiglitz, too, at Stony Rises, now called Elaine, some very fine quartz is being got out by small co-operative parties, some of the stone averaging 2 oz. to the ton, and giving dividends of from 40*l.* to 115*l.* a month to each man. One party in one week had as much as 214 oz. of gold from 66 tons of quartz. As the country gets opened up more, it is fully expected many more of these reefs will be found.

THE OVERLAND TELEGRAPH.

THREE weeks ago, when all but 150 or 160 miles of the overland telegraph had been finished, the first English message reached Melbourne. The telegram of the London correspondent of *The Argus*, dated on the 22nd June, was delivered on the 2nd July, so the news was only ten days old. But ten days does not represent the time that it took the horse express to carry the messages across the gap. The express started from the Daly Waters—the southern end of the northern wire—on Wednesday, the 26th June, and reached the first station in direct communication with Adelaide on Tuesday, the 2nd July. Several days' later news,

(*Continued on page* 3.)

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

SATURDAY, SEPTEMBER 7, 1872.

LIST of the PRINCIPAL DIVIDENDS PAID in VICTORIA DURING the MONTH ending MAY 18, 1872.

ALLUVIAL.

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Annabella, Huntly	0 1 6	Apr. 27	3,100	232 10 0
Argyle, Linton	0 5 0	May 11	3,200	800 0 0
Band and Albion Consols, Ballarat	0 0 0	Apr. 27	22,450	6,735 0 0
Band of Hope, Maryborough	0 2 0	May 4	6,000	600 0 0
Durham, Ballarat	14 5 0	Apr. 27	40	570 0 0
Galatea, Scarsdale	0 5 0	,, 27	2,100	525 0 0
Gladstone, Maryborough	0 2 0	,, 27	6,000	600 0 0
	0 1 0	May 11		300 0 0
Golden Gate, Maryborough	0 2 0	,, 11	660	66 0 0
Golden Stream, Scarsdale	0 5 0	,, 4	2,000	500 0 0
Haddon, Haddon	3 0 0	Apr. 27	64	192 0 0
	2 10 0	May 11		160 0 0
John Bright, Maryborough	0 1 0	,, 4	6,000	300 0 0
	0 1 0	,, 18		300 0 0
Prince of Wales, Sebastopol	0 2 0	Apr. 27	8,343	834 6 0
Seaham, Maryborough	0 2 0	May 4	6,000	600 0 0
	0 2 0	,, 18		600 0 0
Telegraph, Huntly	0 0 6	,, 4	24,000	600 0 0
				£14,514 16 0

QUARTZ.

	£ s. d.			£ s. d.
Champion, Sandhurst	0 0 2	May 11	24,000	200 0 0
Champion Tribute, Sandhurst	0 0 3	,, 11	24,000	300 0 0
Cornish, Daylesford	0 2 6	,, 4	1,300	162 10 0
	0 5 0	,, 18		325 0 0
Cornish United, Daylesford	1 10 0	Apr. 27	800	1,200 0 0
G. G. Consolidated, Sandhurst	0 0 6	May 11	40,000	1,225 0 0
Glengonner, Lauriston	0 2 0	,, 4	2,000	200 0 0
Golden Fleece, Sandhurst	0 1 0	Apr. 27	20,000	1,000 0 0
	0 1 0	May 11		1,000 0 0
Great Extended Hustler's, Sandhurst	0 1 6	,, 4	28,000	2,100 0 0
	0 1 6	,, 18		2,100 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst	0 6 0	Apr. 27	28,000	8,400 0 0
	0 6 0	May 11		8,400 0 0
Iron Bark, Sandhurst	0 1 0	Apr. 27	9,000	450 0 0
Lazarus New Chum, Sandhurst	0 2 0	,, 27	45,000	4,500 0 0
	0 3 9	May 11		8,437 10 0
Long Tunnel, Stringer's Creek	2 10 0	,, 11	2,400	6,000 0 0
New Caledonian, Castlemaine	0 0 6	,, 18	24,000	600 0 0
New Chum & Victoria, Sandhurst	0 0 6	,, 4	25,000	625 0 0
	0 0 6	,, 18		625 0 0
New Chum & Victoria Tribute, Sandhurst	2 5 0	,, 18	800	1,800 0 0
New Fear Not, Daylesford	0 1 0	Apr. 27	3,600	180 0 0
New North Clunes, Clunes	4 0 0	May 4	2,056	8,224 0 0
North Cross Reef, Pleasant Creek	0 14 0	,, 18	10,000	7,000 0 0
North Gipp's Land, Walhalla	0 5 0	,, 4	2,400	600 0 0
Old Chum, Sandhurst	0 0 6	Apr. 27	27,000	675 0 0
Pioneer (Koch's), Sandhurst	0 1 0	May 11	30,000	1,500 0 0
Rose of Denmark, Sandhurst	0 0 6	,, 18	24,000	600 0 0
Shenandoah, Sandhurst	0 1 0	,, 18	32,000	1,600 0 0
Walhalla, Gipp's Land	1 10 0	,, 11	600	900 0 0
White's Freehold, No. 1, Sandhurst	0 0 3	,, 18	24,000	300 0 0
Victoria Gold Mines, Sandhurst	0 1 0	,, 18	20,274	1,013 14 0
				£72,242 14

Dividends paid by Alluvial Mining Companies	14,514 16 0
,, ,, ,, Quartz ,, ,,	72,242 14 0
	£86,757 10 0

DURING the MONTH ending JUNE 15, 1872.

ALLUVIAL.

	£ s. d.			£ s. d.
Annabella, Huntly	0 1 0	May 25	3,100	155 0 0
Argyle, Linton	0 4 0	June 8	3,200	640 0 0
Band and Albion Consols, Ballarat	0 4 0	,, 1	22,450	4,490 0 0
Bute, Smythesdale	5 10 0	,, 8	40	220 0 0
Gladstone, Maryborough	0 1 6	May 25	6,000	450 0 0
	0 1 6	June 8		450 0 0
Golden Lake, Springdallah	0 5 0	May 25	4,400	1,100 0 0
Haddon, Haddon	3 0 0	,, 25	64	192 0 0
	2 10 0	June 8		160 0 0
John Bright, Maryborough	0 1 0	,, 1	6,000	300 0 0
	0 1 0	,, 15		300 0 0
Prince of Wales, Sebastopol	0 2 0	May 25	8,343	834 6 0
Sadowa, Sandhurst	0 0 6	June 15	24,000	600 0 0
Seaham, Maryborough	0 2 0	,, 1	6,000	600 0 0
	0 2 6	,, 15		750 0 0
Try-Again, Smythesdale	13 0 0	,, 15	23	299 0 0
				£11,540 6 0

QUARTZ.

	£ s. d.			£ s. d.
Argus, Sandhurst	0 0 6	June 15	20,000	500 0 0
Collman & Tacchi, Sandhurst	0 0 6	,, 1	24,000	600 0 0
Cornish, Daylesford	0 5 0	,, 15	1,300	325 0 0
Cornish United, Sandhurst	1 5 0	May 25	800	1,000 0 0
Costerfield G. and A., Heathcote	0 10 0	June 15	2,000	1,000 0 0
G. G. Consolidated, Sandhurst	0 0 6	,, 8	49,000	1,225 0 0
Glengonner, Lauriston	0 2 6	,, 1	2,000	250 0 0
	0 2 0	,, 15		200 0 0
Great Extended Hustler's, Sandhurst	0 2 0	,, 1	28,000	2,800 0 0
	0 2 6	,, 15		3,500 0 0
Great Extended Hustler's Tribute, Sandhurst	0 6 6	May 25	28,000	9,100 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst	0 8 [illegible]	June 8	28,000	11,200 0 0
Hercules, Sandhurst	0 0 6	,, 8	28,000	700 0 0
Lazarus New Chum, Sandhurst	0 0 6	May 25	45,000	1,125 0 0
Long Tunnel, Walhalla	3 0 0	June 8	2,400	7,200 0 0
New Caledonia, Castlemaine	0 0 6	,, 15	24,000	600 0 0
New Chum and Belle Vue Railway Reserve, Sandhurst	0 0 6	May 25	28,000	700 0 0
	0 0 6	June 8		700 0 0
New Chum and Victoria Tribute, Sandhurst	1 0 0	,, 1	800	800 0 0
	1 0 0	,, 15		800 0 0
New Fear-not, Daylesford	0 2 0	May 25	3,600	360 0 0
New North Clunes, Clunes	1 0 0	,, 25	2,056	2,056 0 0
North Gipp's Land, Walhalla	0 5 0	June 1	2,400	600 0 0
Red Jacket, Bright	0 2 6	,, 1	3,000	375 0 0
Royal Oak, Sandhurst	0 0 6	,, 8	24,000	600 0 0
Shenandoah, New Chum and Bellevue Tribute, Sandhurst	0 0 6	,, 11	24,000	600 0 0
	0 0 6	,, 15		600 0 0
Unity (Garden Gully), Sandhurst	0 0 6	,, 25	20,000	500 0 0
				£50,016 0 0

Dividends paid by Alluvial Mining Companies	£11,540 6 0
,, ,, Quartz ,, ,,	50,016 0 0
	£61,556 6 0

DURING the MONTH ending JULY 18, 1872.

ALLUVIAL.

Names of Companies.	Amount per Share.	Date.	No. of Shares.	Dividend.
	£ s. d.			£ s. d.
Alma Consols, Maryborough	0 2 0	July 6	6,000	600 0 0
Argyle, Linton's	0 4 0	,, 6	3,200	640 0 0
Band and Albion Consols, Ballarat	0 4 0	June 22	22,450	4,490 0 0
Band of Hope, Maryborough	0 2 0	,, 29	6,000	600 0 0
	0 2 0	July 13		600 0 0
Galatea, Scarsdale	0 5 0	,, 6	2,100	525 0 0
Gladstone, Maryborough	0 1 6	June 22	6,000	450 0 0
	0 1 6	July 6		450 0 0
Golden Lake, Springdallah	0 5 0	June 22	4,400	1,100 0 0
Golden Stream, Smythesdale	0 10 0	July 6	2,000	1,000 0 0
Haddon, Haddon	3 10 0	June 22	64	224 0 0
	2 0 0	July 6		128 0 0
John Bright, Maryborough	0 2 0	June 29	6,000	600 0 0
	0 4 0	July 13		1,200 0 0
Little Stream, Smythesdale	14 0 0	,, 13	14	196 0 0
Phœnix, Sebastopol	0 6 3	June 22	2,000	625 0 0
Seaham, Maryborough	0 2 0	,, 29	6,000	600 0 0
	0 1 0	July 13		300 0 0
Try Again, Smythesdale	15 0 0	June 29	23	345 0 0
	17 0 0	July 13		391 0 0
				£15,064 0 0

QUARTZ.

	£ s. d.			£ s. d.
Ajax, Alexandra	0 0 2	July 6	10,000	83 6 8
Bendigo and Ballarat Freehold, Sandhurst	0 10 0	June 29	500	250 0 0
Black Hill, Ballarat	0 2 6	July 13	2,480	310 0 0
C. C. Freehold Tribute, Sandhurst	0 0 5	,, 13	24,000	500 0 0
Clunes Freehold, Clunes	0 4 0	June 22	2,000	400 0 0
Cornish, Daylesford	0 5 0	July 13	1,300	325 0 0
Cornish United, Sandhurst	1 0 0	June 22	800	800 0 0
Costerfield G. & A., Costerfield	1 0 0	July 13	2,000	2,000 0 0
Eastwood's Quartz, Sandhurst	3 5 0	,, 13	24	78 0 0
Empire, Sandhurst	0 0 6	June 29	24,000	600 0 0
G. G. Consolidated, Sandhurst	0 1 0	July 6	40,000	2,450 0 0
Glengonner, Lauriston	0 2 0	,, 6	2,000	200 0 0
Golden Sovereign, Sandhurst	0 0 6	June 29	24,000	600 0 0
Great Extended Hustler's, Sandhurst	0 2 0	,, 29	28,000	2,800 0 0
	0 1 6	July 13		2,100 0 0
Great Extended Hustler's Tribute, No. 1, Sandhurst	0 5 0	June 22	28,000	7,000 0 0
	0 3 6	July 6		4,900 0 0
Harbinger, Gipps' Land	0 2 0	June 22	3,200	320 0 0
Imperial, Ballarat	0 10 0	,, 29	300	150 0 0
Lazarus New Chum, Sandhurst	0 0 6	July 13	45,000	1,125 0 0
Long Tunnel, Walhalla	2 10 0	,, 13	2,400	6,000 0 0
New Chum and Belle Vue Railway Reserve, Sandhurst	0 1 0	,, 6	2,8000	1,400 0 0
New North Clunes, Clunes	1 0 0	June 29	2,056	2,056 0 0
	3 0 0	July 13		6,168 0 0
North Cross Reef, Pleasant Creek	0 16 0	June 22	10,000	8,000 0 0
	0 16 0	July 6		8,000 0 0
North Fear-Not, Daylesford	0 0 4	June 29	24,000	400 0 0
Nova Scotia, Pleasant Creek	2 10 0	July 13	40	100 0 0
Red Jacket, Bright	0 2 6	June 22	3,000	375 0 0
Shenandoah, New Chum and Belle Vue Tribute, Sandhurst	0 0 6	,, 29	24,000	600 0 0
	0 0 6	July 13		600 0 0
Troubadour Tribute, Maldon	0 0 6	June 29	32,000	800 0 0
Unity, Sandhurst	0 0 6	July 13	20,000	500 0 0
Victoria Gold Mines, Sandhurst	0 1 0	June 22	20,274	1,013 14 0
	0 1 0	July 6		1,013 14 0
Walhalla, Gipps' Land	1 0 0	,, 13	600	600 0 0
				64,617 14 8

Dividends paid by Alluvial Mining Companies	15,064 0 0
,, ,, Quartz ,, ,,	64,617 14 8
	£79,681 14 8

VICTORIAN MINES.

NOTE.—*Very few of our usual exchanges have reached us this month, and our mining news is consequently very bare.*

WINTER'S FREEHOLD GOLD MINING COMPANY, LIMITED, BALLARAT, *July 16th, 1872.—Re Consols.*—As mentioned in my last letter, the dispute with this Company has been settled; since then the consent agreement has been signed, and the 500*l.* deposit will be withdrawn from the Supreme Court this week. By terms of this consent we have power to work our ground from No. 3 Consols, and last night arrangements were made for six men to continue the Consols' drive into the paddock and connect with our south low level, following the guttet, and stowing it below until we break through. *No. 1 Shaft Mine Report.*—Our yields, though not so good as last month, have still kept up to a very fair average, and we have been enabled to pay 2000*l.* sterling off the bank debt. The half-yearly report states, with reference to *No. 1 Shaft*, that the directors are happy to announce that the anticipations of improvements conveyed in our last report have been realized. A run of very rich ground has been discovered on the south-west side of the gutter. On the east side an extensive reef wash has been proved, whilst to the extreme south the Consols having worked the rich run (from their No. 3 Shaft) up to the Smythesdale Road, in a short time the south low level will break through into this run, and from the course it was treading at the point where the Consols ceased working (viz., to the N.W.), there will be a very extensive area of ground to operate on. From the Mine Manager's report it will be seen that a large extent of wash is now opened ready for blocking, and that prospecting drives are being pushed off to the east and west. During the past half year considerable additions have been made to the plant; a fourth boiler has been erected and connected; a spare plunger and false bottoms for the puddling machine are on the ground; a charging house has been built, and the men are now searching as they come up from the mine.

Mine Manager's Half-yearly Report, ending 29th June, 1872.—Since my last half-yearly report, a large extent of ground has been explored from No. 5 jump up. After driving 700 feet from said jump up, in a north-easterly direction, a gutter was struck, with rock for headings, and about 3 feet deeper than any ground previously worked in the mine; from its characteristics, it is supposed to be a continuation of the gutter formerly worked by the Hand and Band Company from their No. 1 shaft. This gutter was followed a distance of about 500 feet to the north boundary of this Company's property, and about 400 feet of it has been blocked out, but, unfortunately, the greater portion of it proved poor, unproductive ground. On the east side, and about 8 feet higher than the gutter, a very extensive reef wash has been opened up, a drive 700 feet long, nearly due east, and several extensive cross drives, have been put in, and some patches of good paying ground have been met with; several cross drives were also driven west from the gutter, all of which passed through very poor ground, until about four weeks since, a drive going in a westerly direction came on to a run of good paying ground, which, when followed up, led on to a very rich run of wash dirt, the gold being coarse, and of very good quality; every effort has since been made to further prove this ground in a westerly direction. A drive was at once commenced to intersect the run of good ground, about 120 feet farther to the south-west. Another drive has also been commenced to go north from No. 6 jump up; this drive is likely to reach the same run of ground at no great distance from the jump up, which will greatly facilitate the working of the mine. The ground now opened up is patchy, and quite of

EXTRACTS FROM DICKER'S AUSTRALIAN AND LONDON GAZETTE.

a different character from any previously met with in the mine; it is easily worked, and properly opened up for blocking; large quantities of dirt can easily be got away, and correspondingly good yields of gold may be expected. To the south, the reef drive has been pushed on with all possible speed to reach the gutter that was worked to our boundary by the Band of Hope and Albion Consols Company, and from which they obtained such good returns. Should this gutter continue on its present course, the distance yet to be driven to strike it will not exceed 300 feet.

Engineer's Half-yearly Report.—No. 1 *Shaft.*—The pumping, puddling, and winding machinery have been kept in good working order. The boilers have been regularly cleaned, examined, and kept in good order; no stoppages of any kind during the past quarter. A new boiler (No. 4) made by Mr. Hickman, 31 feet 5 inches long, 6 feet 6 inches in diameter, 44 feet in flue, with seven galloway tubes, and tested to 100 lbs. pressure per square inch, has been built in, covered, and connected to the other three boilers; you have now plenty of steaming power at this shaft. *No.* 2. *Shaft.*— The tributors worked for some time at this shaft, and they kept the winding, puddling, and pumping machinery in good working order. They have now ceased working, and the pumps are drawn from the shaft.—*July 2nd*, 1872.

Gold Report—No. 1 *Shaft.*

1872.		oz.	dwt.
June 19	Yield	51	1
,, 20	,,	29	4
,, 21	,,	34	8
,, 22	,,	32	18
,, 24	,,	38	6
,, 25	,,	25	11
,, 26	,,	29	16
,, 27	,,	38	8
,, 28	,,	27	11
,, 29	,,	21	2
July 1	,,	22	4
,, 2	,,	28	1
,, 3	,,	31	10
,, 3	Black Sand	27	3
,, 4	Yield	53	19
,, 5	,,	40	7
,, 6	,,	41	9
,, 8	,,	25	14
,, 9	,,	34	16
,, 10	,,	27	2
,, 11	,,	43	3
,, 12	,,	42	17
,, 13	,,	36	18
,, 15	,,	25	0
,, 16	,,	43	4
	Total	851	12

Winter's Freehold Company.—The drive going north from the east shaft has dipped so fast that it has been found necessary to bring on a dead level drive from the rock. The west drive has been extended 35 feet, and a jump-up started. At No. 6 rise the reef is good for driving: distance in from rise, 145 feet. Contractors for the west drive are making better progress; 33 feet driven during the fortnight. In the south low level the ground is better for driving; distance driven for the fortnight, 33 feet. From a recent survey the manager calculates that another 200 feet driving will intersect the gutter worked from No. 3 Consols. A fresh contract for 200 feet has been let, and a party of men will be put on at the No. 3 Consols to drive in the gutter into the Winter's paddock, and connect with the south workings, the washdirt in the meantime to be stowed below. The Hand and Band Company have filed a bill applying for a survey and inspection of our northern workings. The application was heard last Thursday before Judge Moleworth, but in consequence of the title of this company being wrongly set out by the Hand and Band Company, the case was postponed for one week, to allow them to amend. The Winter's Freehold Company has done its best to avoid being involved in litigation; both the mining and legal managers of the Hand and Band have been allowed to examine our workings, and an offer was made in writing to allow the Hand and Band Company to survey our works at reasonable times, provided that an agreement was entered into that they would not divert any water into our mine. The bulk of the water from the Saints Company is now flowing into the Winter's Freehold, as certified to by the report of the chief mining-surveyor; and the workings of the Hand and Band Company being at a higher level than the Winter's, a similar hydraulic experiment to that practised by the Saints Company may be tried upon us without the slightest chance of obtaining any redress. The Winter's Company is only fighting in self-defence. As stated a few weeks back, the ground from which we are now obtaining our gold is situate from 500 to 600 feet to the south of our boundary abutting on the Hand and Band lease, so there need be no apprehension of any encroachment. From the result of the past month's works 2000*l.* have been written off the debt. Mr. Robert Anderson has been appointed mine manager *vice* Mr. Nicholas, who resigned, having accepted another situation. Yield on Saturday, 36 oz. 18 dwt.; total for the week, 210 oz. 10 dwt.—*Ballarat Star, July 15th*, 1872.

Mariner's Reef Quartz Mining and Crushing Company.—*Maryborough, July 12th*, 1872.—Ellery & Co. have cut down during the week 17 feet, making the total for month 49 feet 6 inches, and from brace 391 feet 6 inches. The ground is still good, and last night we hauled up the door-piece and wind bore, the last lot of lift No. 3, and now we have only one more, which goes down to the 550 feet, but how long it is we cannot exactly tell. During the six months ending to-day, Sleeman & Co. finished their contract for cutting down shaft fixing, plunger, &c. (labour only), to the water level, 273 feet, at 45*s.* a foot; and on the 27th April a fresh contract was let to Ellery & Co. to continue it down to the 550-feet level, fix another plunger lift, do all the work, and find materials, for 6*l.* per foot; and they have already done 117 feet. Little or no trace of quartz has been met with in going down. The pumps and pumping engine work well, and the alteration is a great improvement. We also put in a cross-cut west from a shaft in the Phœnix Ground, 88 feet, at 6*s.* a foot, but discovered nothing to pay. Several tribute parties have been and are still prospecting about in various parts of the mine, but to no profit as yet. I would recommend the continuance of the east cross-cut at No. 2 level, so soon as the water allows of ventilation from the engine-shaft. I hope that before the end of another six months to be in full swing, with stamps all going, &c.

Australian and New Zealand Dividend Gold Mines Investment Company, Limited.—The agent in the colony writes that the share market is very dull just at present, and he thinks it more prudent to refrain from investing just now. He has made an offer, however, for New North Clunes, and may yet succeed at the limit he has fixed, viz., 90*l.* The only dividends reported this month are two of 1*s.* each Victoria Gold Mines, and 1*l.* with bonus of 3*l.* per share, New North Clunes, of which the company holds three shares purchased last month. The New Zealand mail not being in, we have no report whatever from this gold-field.

North Costerfield Gold and Antimony Company.—No Liability.—*Progress.*—The whim or air shaft is progressing well, being down 125 feet, and the mine manager reports the ground to be favourable. He further states that he is confident another fifty feet will take us to the lode. If so, we may look for some returns even sooner than we expected. The old company is going on very satisfactorily, making good profits and gradually opening up new ground of the most promising description, both in depth and the extension of main levels. This month it paid a dividend of 1*l.* per share, which is equivalent to 24,000*l.* per annum; and this with very inadequate means for working new ground. The North Costerfield will take a high position on its merits in the local markets, and several sales have been made at par.

Costerfield Gold and Antimony Company, *July 13th.*—During the past fortnight 51 tons of stone being crushed yielded 110 oz. of gold. 60 tons of antimony ore were obtained. Steps are being taken to erect an atmospheric engine in the 420-feet level, to draw up water and mineral from the new underlie shaft. It will be seen this company has paid a dividend of 21*s.* per share, equivalent to a rate of 24,000*l.* per annum.

Energetic, Lauriston, *June 22nd.*—During the past fortnight the shaft has been sunk 12 feet, making a total depth of 53 feet below the 230-feet level. The last 3 feet sunk through the ground has been a little easier, with more quartz leaders intermixed. Water still continues about the same. *July 6th.*—During the last fortnight shaft has been sunk a farther depth of 11 feet, making in all 64 feet below the 230-feet level. No change to notice in the ground or quantity of water. Country sunk through still slate and sandstone. More quartz leaders are coming in as we go down.

Hope, Wood's Point, *June 24th.*—Yield for fortnight 81 oz. 9 dwt., of which 12 oz. 12 dwt. was taken from 82 tons of the company's quartz, and 68 oz. 17 dwt. from 202 tons No. 4 Tribute. The rises did not break through until Thursday, and no payable stuff could be got in consequence. There is a fair show in the upper reef, and we are now breaking principally from it. Boring in bottom of shaft was commenced on Monday night (the 17th), and continued for 6 feet through the same country. The next 6 inches of darker granite, mixed with quartz, was got through very quickly, the strata being evidently much broken. Pipes are now being fixed in order to continue boring from above the water level. *July 8th.*—The washing up gave 5 oz. 4 dwt. out of 85 tons of the company's quartz, and 22 oz. 8 dwt. from 133 tons No. 3 Tribute. The gold has apparently run out in the ground lately opened by the winze, which was expected to yield well; but as the stone still looks well, a few hands are working across to see if it makes again. Other ground is now being tried. The bore has been stopped since the night of the 5th, by the carelessness of the men getting a bitt unscrewed in the bottom, and afterwards beating it down till jammed. A grip was got of it with the screw used for the purpose, but the threads were stripped off in attempting to lift it. Nothing more can be done until another is sent from town.

New North Clunes, *July 8th.*—No. 1 level is driven north 310 feet; the lode is still broken; the south end is driven 261 feet, lode still poor. The west cross-cut is in 72 feet; nothing struck here yet. No. 2 level.—A cross-cut is being put in east 60 feet from shaft, to meet a winze that will be sunk on the new lode for the purpose of stoping out the quartz below No. 1 level. This cross-cut is in 37 feet. No. 6 level.—The north end is in 113 feet, without improvement during the fortnight. No. 7 level.—The north end is extended 267 feet; the lode at present is small.

Rose of Denmark, *July 10th.*—Pump fixed; shaft in No. 3 tunnel, clear of water, and showing good coarse gold, both in bottom and stope, going north. The new shaft in same tunnel, at a depth of 18 feet, also shows coarse nuggetty gold, better than any yet seen.

NEW ZEALAND MINES.

Note.—*The New Zealand Mail, viâ San Francisco, has not yet arrived, and the following notices have reached us viâ Melbourne.*

Tookeys, New Zealand, *Argus, July 8th*, 1872.—The following telegram from Auckland, *viâ* Sydney, was received at the Ballarat office, on Saturday, July 6th. Engine full speed; water rising; 3 feet in level from Caledonian winze, will have to stop work in twenty-four hours; level with Tookey's claim, 10 feet; lode about 6 feet wide, much metal, no gold seen. United Pumping Association raising their cylinder in place; work progressing rapidly.

Tookey Quartz, New Zealand, *June 25th.*—The manager in Ballarat this morning received a telegram from the mine manager, dated Grahamstown, June 17th, to the following effect:—The winze level from the Caledonian workings has reached the Tookey boundary. The quartz is looking much better, but no gold as yet. The United Pumping Association are engaged fixing rods and lifts.

THE OVERLAND TELEGRAPH.

(Continued from page 1.*)*

therefore, might have been received; but unfortunately a day or two before the time appointed for the despatch of the first batch of telegrams from Daly Waters, something went wrong with the cable of the British-Australian Telegraph Company, between Port Darwin and Java. The nature of the mishap was not known. Since the 2nd instant no messages have come through, but as the South Australian Government has arranged for a regular express, the second supply of English news may reach Melbourne at any moment. The message that actually came through first was from a London firm to their Melbourne partners — Messrs. Macarthur, Sherrard, and Copeland. Tuesday, June 25, was the day on which the first lot of Australian messages was transmitted to Tennant's Creek, and forwarded thence by horse express to the northern section. Whether the communication from Daly Waters to London was open on the arrival of the express will of course be better known to our English readers than to us. Numerous messages were sent. The governors of the Australian colonies congratulated the Queen, and the representatives in Adelaide of European and American Powers telegraphed to their respective headquarters. Messages were received at the Adelaide office for transmission to nearly every part of the world to which telegraph communication extends. No doubt the official message which travelled the longest distance was the one addressed to the President of the United States. An up-country shire council had the boldness to send a message to the Lord Mayor of London. The receipts on the first day amounted to over 300*l.* From Port Augusta to Tennant's Creek, a distance of 1200 miles, the telegrams were transmitted with the utmost facility. The total length of the overland wire is 1800 miles; the length of the cable and the Java overland wire of the British-Australian Company is 2040 miles, making 3840 miles from Port Augusta, in South Australia, to Singapore. From Adelaide to London the distance is about 13,000 miles. So satisfactorily was the erection of the remainder of the wire going on when the latest news was sent, that by this time the interval ought to have been lessened to 80 miles. Day by day the construction parties will approach each other, until, in less than a month from now, the ends ought to be tied together, and the first direct message telegraphed. Public rejoicings will no doubt be deferred until then.

The superintendent of telegraphs in South Australia reports the state of the work as follows, on June 26:—"The line is completed and opened from Port Darwin to 15 miles south of Daly Waters, and the wire will be run up as quickly as the poles are planted, an operator being kept at the end of the wire to render all additional wire available for future communication. From the Port Augusta side communication at present extends to Tennant's Creek, and Harvey has poled 70 miles farther north. Burton, who has the section immediately north of Harvey, is now on his work, and has 54 miles of wire for Harvey, which, with what is already at Tennant's Creek, will extend the communication 60 miles north of that point. The four teams which were detached from Harvey's party left the Daly Waters on the 21st with 30 miles of

wire, and should reach their destination in about three weeks, when the wire can be immediately extended 100 miles north of Tennant's Creek. On the existing gap we have four large construction parties, under Messrs. Harvey, Burton, Mitchell, and Rutt. The three last are provisioned up to the end of October, and sufficient wire, &c., to close the line is now south, or at the Daly Waters. We have nothing more to bring up from the Roper but rations to enable the men to return and maintain a small party erecting the stations, which cannot be completed till after the wet season. It is doubted whether the stores or building materials for the stations can be carted this season, as we require all the available teams for line construction. Mr. Rutt, who has 50 or 60 miles of line south of the Daly Waters, is expected to complete his section in August, and will then return along the line and sink two or three wells on the dry country in the bed of the Burdum, between the Daly Waters and the Warlock Ponds on the Elsie. These are required for the further maintenance of the line, and to secure a safe retreat for the whole party, as the waterholes in the Strangways will not last. It is probable that the whole of the construction parties will be withdrawn by the end of September, except such as are required to build the stations; but of course some time before that I hope to secure through wire communication."

A somewhat disheartening piece of information reached the South Australian Government about the same time that their first success was achieved, viz., that the British-Australian Company had to some extent thrown them over by agreeing to lay down a cable from Port Darwin to Normanton, in the Gulf of Carpentaria, where Queensland has had a line waiting for months past. South Australia undertook, in the original agreement, to have her line ready on the 1st January last. The company had completed the sinking of their cable before that time. The Government have not finished yet. In May, 1871, the contractors for the northern section of the line suspended operations. Time was lost before the Government could send round parties to Port Darwin to take up the abandoned work. More time was lost through an error on the part of the Government. They were recommended by the superintendent of telegraphs to base their operations from the Roper River, 220 miles nearer to the unfinished section than Port Darwin was, but a long time elapsed before they adopted his advice. When it became apparent, in November last year, that the Government could not finish the work in time, Lord Monck, the chairman of the company, addressed a letter to the agent-general in London, offering to forego the penalties under the agreement on condition of South Australia paying 5 per cent. upon the capital expended by the company upon its cable. The agent-general telegraphed to Adelaide upon the subject, and the Ministry at once replied accepting the offer. It so happened, however, that through a mispunctuation the tenor of the agent-general's telegram was slightly misunderstood, and upon receipt of Lord Monck's original letter in Adelaide it became necessary for the Government to write again agreeing to the offer according to the actual terms thereof. Before their despatch could reach England, his lordship had submitted a second proposal in substitution for the first. In it he claimed not only 5 per cent. upon the capital expended, but a clear 5 per cent. over and above the working expenses of the association; in other words, the guarantee of a 5 per cent. dividend to the shareholders. These terms were considered unreasonable, and negotiations were entered upon which we now learn have ended unsatisfactorily.

It will be remembered that when the backward state of the South Australian line became known the Queensland Government tried hard to persuade the company to connect the cable with their wires, but the company stuck to their agreement with South Australia. Probably the fact that Queensland has shown an inclination to treat with any company who will lay down a cable for her, may have helped to bring about the change that has occurred. The double line will be an undoubted advantage to Australia. At the same time, it is to be hoped that such an arrangement will be made as will secure an advantageous position to South Australia, after the enterprise she has displayed in this great undertaking.

The North Costerfield Gold and Antimony Mining Company. No Liability. Costerfield, near Bendigo, Victoria, Australia.

Capital 50,000*l.* in 50,000 Shares of 1*l.* each.
Paid up 10*s.* per Share, viz.:—

20,000 Shares of 1*l.* each, 10*s.* per Share paid, = 10,000*l.* allotted in the Colony.

30,000 Shares of 1*l.* each, 10*s.* per Share paid, = 15,000*l.* to be allotted in England.

50,000 Shares. 25,000*l.* called up.

The London Agent has instructions to offer the above parcel of 30,000 Shares:—

2*s.* 6*d.* per Share to be paid on Application; 2*s.* 6*d.* on Allotment; and 5*s.* in Three Months after Allotment. The Balance, if required, in Calls not exceeding 1*s.* per Share per month.

It is estimated, however, that 10*s.* per Share will be quite sufficient for all purposes of the undertaking.

Directors in the Colony.

Robert Burrowes, Esq., M.L.A., Member of the Legislative Assembly for Sandhurst, Bendigo.

Thomson Moore, Esq., M.L.A., Member of the Legislative Assembly for Mandurang, Bendigo.

Samuel P. Lord, Esq., J.P., Melbourne.

D. A. Osborne, Esq., Melbourne.

Dr. Fitzgerald, Melbourne.

William Gardiner Sprigg, Esq., Melbourne.

London Agent.

Thomas Dicker, Esq. (formerly Editor and Proprietor of *Dicker's Mining Record*, Melbourne.)

Offices.

4, Royal Exchange Avenue, London, E.C.

The object of this Company is to work the extensive property known as the North Costerfield Mine, for both gold and antimony. Its area is 25 acres 2 roods and 4 perches, with a length on the course of the lode of 1613 feet.

The Mine adjoins the well-known Costerfield property. The lode runs between solid and well-defined walls, without fault or break, and *bears the reputation of being the finest Antimony lode in the world.—Vide* Report of J. Brache, Esq., Civil and Mining Engineer, late Superintendent of Mining Surveys to the Geological Department, Melbourne.

This Company is registered in Melbourne under the "No Liability" clause of the "Limited Liability" Act of the Colony of Victoria, which limits the amount to be called up to 1*l.* per Share.

Plans and prospectuses with the fullest information may be had, and samples of ore taken from both mines can be seen, upon application to the London Agent (who has personally inspected the lode), 4, Royal Exchange Avenue, London, E.C.

AUSTRALIAN & NEW ZEALAND DIVIDEND GOLD MINES INVESTMENT CO. (Limited).

No. 1, No. 2, and No. 3 Series.

Shares can be obtained in each of No. 1 and No. 2 Series. Apply at 4, Royal ExchangeAvenue, E.C.

No. 3 Series.—A small balance of these Shares to be had at par.

AUSTRALIAN AND NEW ZEALAND DIVIDEND PAYING AND PROGRESSIVE MINES.—

Full and reliable information, with list of sound mines for investment, may be obtained on application to Thomas Dicker (late Editor and Proprietor of "Mining Record," Melbourne), 4, Royal Exchange Avenue, London, E.C.

DICKER'S AUSTRALIAN AND LONDON MINING AND GENERAL AGENCY.

4, ROYAL EXCHANGE AVENUE, LONDON, E.C.

List of Shares for sale in Australian and New Zealand Mines, under limited liability.

Mariner's Reef (Gold) Quartz Mining and Crushing Company.

The Winter's Freehold Gold Mining Company, Limited, Ballarat, Victoria.

Australian and New Zealand Dividend Gold Mines Investment Company, Limited, No. 1, No. 2, and No. 3 Series.

Golden Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z.

The London and Thames River, N.Z., Golden Crown Company, Limited.

The Imperial Crown Gold Mining Company, Limited, Thames River, Auckland, N.Z

Albion Gold Mining Company, Thames River, Auckland, No. 3.

London: Printed by Head, Hole & Co., Nos. 11 to 13, Harp Alley, Farringdon Street, and Ivy Lane, Paternoster Row, E.C., for Richard Middleton and Henry English (the proprietors), at their office, 20, Fleet Street, E.C., where all communications are requested to be addressed.—Saturday, September 7, 1872.